NMBAQC

NE Atlantic Marine Biological Analytical Quality Control Scheme

Particle Size Report - PS61

Particle Size Component 2016/17

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APEM

CONTENTS

BENCHMARK DATA

Table 1. Summary data for the benchmark replicates distributed as PS61.

	Method	% Gravel	% Sand	% Mud	Sediment Description (Post analysis)
BM REPLICATE 1	NMBAQC	26.84	71.95	1.20	Gravelly Sand
BM REPLICATE 2	NMBAQC	27.10	71.72	1.18	Gravelly Sand
BM REPLICATE 3	NMBAQC	26.52	72.28	1.20	Gravelly Sand
BM REPLICATE 4	NMBAQC	26.28	72.48	1.24	Gravelly Sand
BM REPLICATE 5	NMBAQC	26.54	72.23	1.22	Gravelly Sand
REP AVERAGE	NMBAQC	26.66	72.13	1.21	Gravelly Sand

Table 2. Summary of equipment used and sieve data for the benchmark replicates distributed as PS61.

	Sieves used	Phi; sieve mesh		Total Weight (g)	Laser used
		Weight (g) < 0.00; >1 mm	Weight (g) > 0.00; <1 mm		
BM REPLICATE 1	☑	229.15	624.25	853.40	☑
BM REPLICATE 2	☑	232.33	624.86	857.19	☑
BM REPLICATE 3	☑	229.19	634.79	863.98	☑
BM REPLICATE 4	☑	226.07	634.10	860.17	☑
BM REPLICATE 5	☑	228.45	631.99	860.44	☑
BM AVERAGE	☑	229.04	630.00	859.04	☑

Table 3. Summary of final laser data for the benchmark replicates distributed as PS61.

	% Sand			
	Coarse 0 - 1 phi	Medium 1 - 2 phi	Fine 2 - 3 phi	Very Fine 3 - 4 phi
BM REPLICATE 1	48.53	43.48	5.58	0.75
BM REPLICATE 2	48.80	43.16	5.64	0.78
BM REPLICATE 3	48.81	43.22	5.57	0.77
BM REPLICATE 4	48.52	43.44	5.57	0.78
BM REPLICATE 5	48.85	43.24	5.49	0.75
BM AVERAGE	48.70	43.31	5.57	0.77

	% Silt					%Clay
	Very Coarse 4 - 5 phi	Coarse 5 - 6 phi	Medium 6 - 7 phi	Fine 7 - 8 phi	Very Fine 8 - 9 phi	>9 phi
BM REPLICATE 1	0.21	0.19	0.23	0.25	0.18	0.59
BM REPLICATE 2	0.21	0.18	0.23	0.25	0.19	0.57
BM REPLICATE 3	0.21	0.19	0.23	0.25	0.18	0.57
BM REPLICATE 4	0.22	0.20	0.24	0.26	0.19	0.58
BM REPLICATE 5	0.22	0.19	0.23	0.25	0.19	0.59
BM AVERAGE	0.21	0.19	0.23	0.25	0.19	0.58

BENCHMARK DATA

Table 4. Summary of descriptive statistics and coefficient of variance for the benchmark replicates distributed as PS61.

	D10 (µm) Result	D50 (µm) Result	D90 (µm) Result	Mean (µm) Result
BM REPLICATE 1	284.85	612.61	7151.14	1074.63
BM REPLICATE 2	285.09	616.85	7163.56	1078.30
BM REPLICATE 3	284.83	612.73	7195.43	1079.28
BM REPLICATE 4	283.91	609.61	7061.87	1067.49
BM REPLICATE 5	285.33	613.34	7215.21	1076.11
Mean	284.80	613.03	7157.44	1075.16
Standard Deviation	0.54	2.58	59.14	4.66
Coefficient of Variance (COV)	0.19	0.42	0.83	0.43

$$COV = 100 * (\frac{Std\ Dev}{Mean})$$

Good repoducibility when: - COV < 3% for D50
-COV < 5% for D10 and D90

All limits double when the D50 < 10 µm.

Benchmark replicates distributed as PS61 show a COV <3% for the D50 and <5% for the D10 and D90.

The replicates show good reproducibility.

Figure 1. Scatterplot of Benchmark Data for PS61 with error bars showing ± 1 SD.

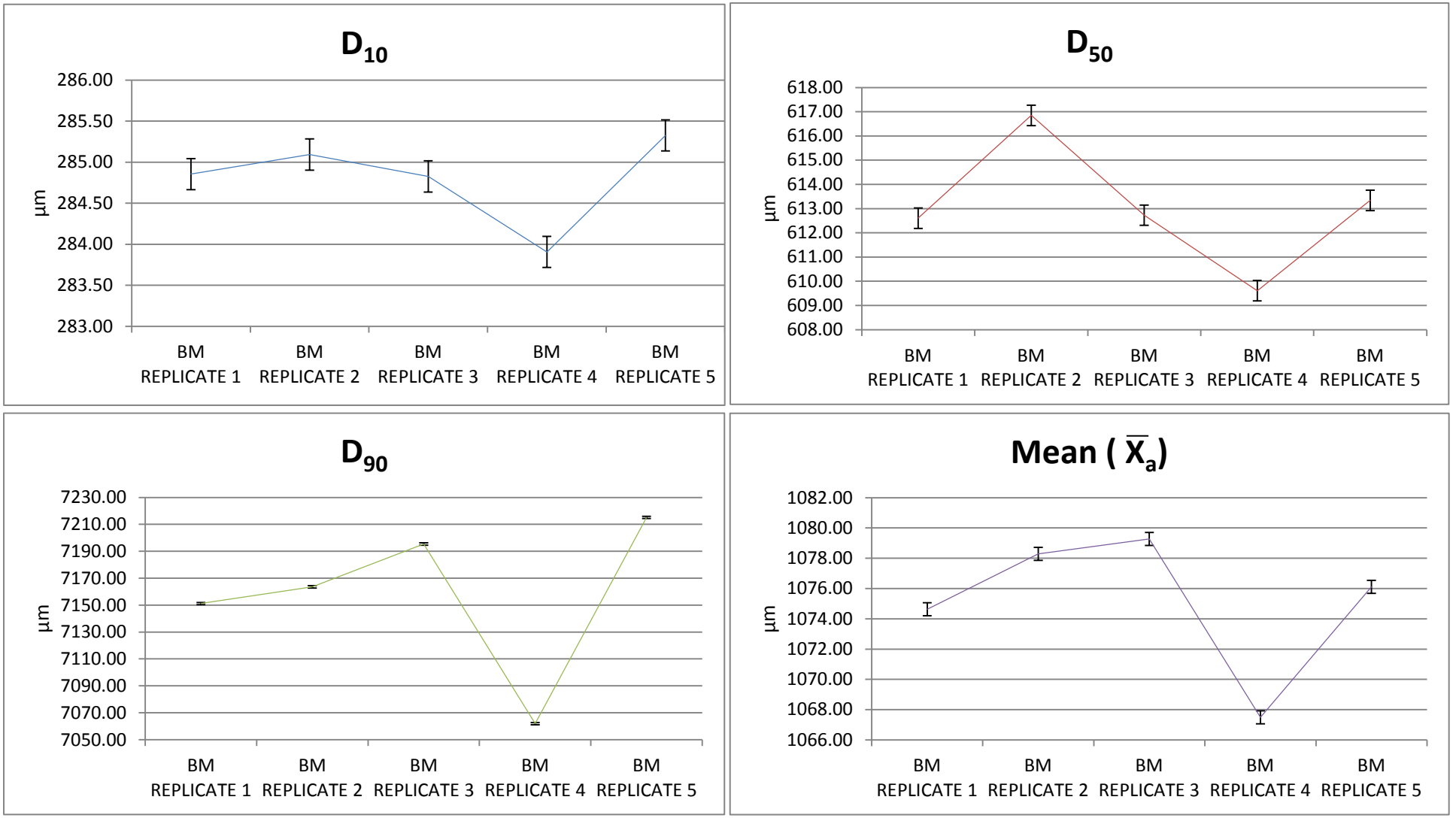
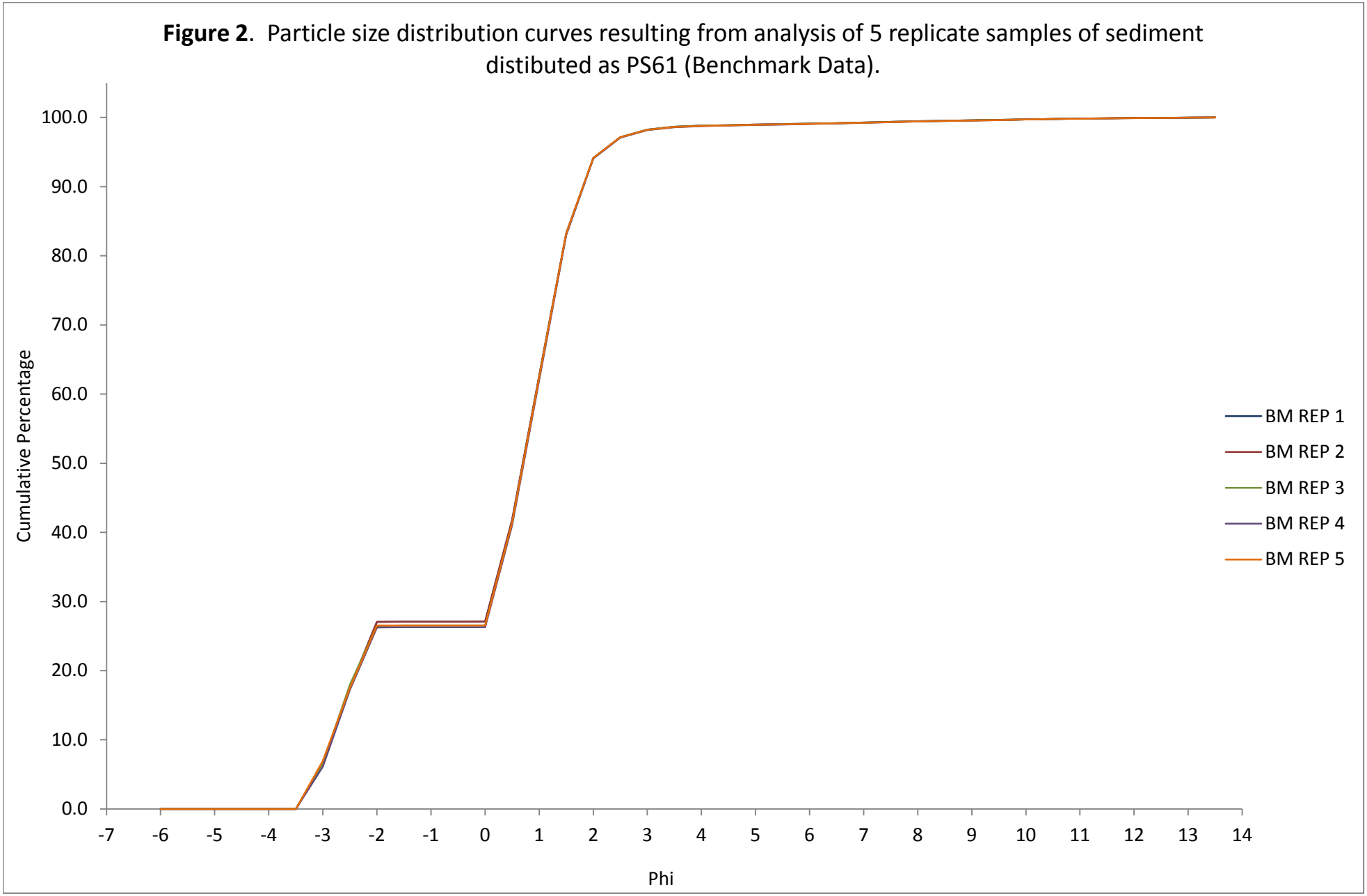


Figure 2. Particle size distribution curves resulting from analysis of 5 replicate samples of sediment distibuted as PS61 (Benchmark Data).



PARTICIPANT DATA

Table 5. Summary of equipment and methods used by participants and sample summary data for PS61.

Lab	Equipment Used		Method Used	Chemical Dispersant Used	Peroxide pre-treatment Used	Summary Data			Sediment Description (Post Analysis)
	Sieves	Laser				% Gravel	% Sand	% Mud	
Benchmark Average	YES	YES	NMBAQC	NO	NO	26.66	72.13	1.21	Gravelly Sand
PSA_2301	YES	YES	NMBAQC[1]	NO	NO	27.92	72.08	0.00	Gravelly Sand
PSA_2302	YES	YES	NMBAQC	NO	NO	26.51	72.22	1.27	Gravelly Sand
PSA_2303	YES	YES	NMBAQC	NO	NO	26.28	71.33	2.39	Gravelly Sand
PSA_2304	YES	YES	NMBAQC	NO	NO	26.5	72.2	1.3	Gravelly Sand
PSA_2305	YES	NO	OTHER[1]	NO	NO	25.8	74.1	0.1	Gravelly Sand
PSA_2306	YES	YES	NMBAQC	NO	NO	25.44	74.56	0.00	Gravelly Sand
PSA_2307	YES	YES	NMBAQC	NO	NO	26.05	70.54	3.41	Gravelly Sand
PSA_2308	YES	YES	NMBAQC	NO	NO	25.7	71.9	2.4	Gravelly Sand
PSA_2309	YES	YES	NMBAQC	NO	NO	27.0	64.7	8.2	Gravelly Muddy Sand
PSA_2310	YES	YES	OTHER[2]	NO	NO	26.89	72.01	1.10	Gravelly Sand
PSA_2311	YES	YES	NMBAQC	NO	NO	26.46	66.59	6.95	Gravelly Sand
PSA_2312	YES	YES	NMBAQC	NO	NO	26.3	73.4	0.3	Gravelly Sand
PSA_2313	YES	YES	NMBAQC	NO	NO	26.85	71.95	1.21	Gravelly Sand
PSA_2320	YES	YES	NMBAQC	NO	NO	26.57	72.54	0.89	Gravelly Sand

OTHER[1] - Pippette method following British Standard methodology

OTHER[2] - In-house methodolgy - no details supplied

NMBAQC[1] - Incorporating BS1377: 1990 Parts 1-2 (sieving) and BS13320: 2009 (laser diffraction).

- Decimal places in summary data as provided by participant.

PARTICIPANT DATA

Table 6. Raw sieve data (weight in grams) provided by participants for PS61.

	Participant														
Phi interval (explicit) + sieve mesh	Benchmark Average	PSA_2301	PSA_2302	PSA_2303	PSA_2304	PSA_2305	PSA_2306	PSA_2307	PSA_2308	PSA_2309	PSA_2310	PSA_2311	PSA_2312	PSA_2313	PSA_2320
-6.50 to -6.00; 63 mm	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-6.00 to -5.50; 45 mm	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-5.50 to -5.00; 31.5 mm	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-5.00 to -4.50; 22.4 mm	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-4.50 to -4.00; 16 mm	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-4.00 to -3.50; 11.2 mm	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.95	0.00	0.00	2.19	0.00	0.00	0.00
-3.50 to -3.00; 8 mm	56.33	50.52	51.98	55.46	56.86	56.72	39.57	55.47	51.09	61.42	50.67	55.47	48.44	51.72	49.64
-3.00 to -2.50; 5.6 mm	94.70	111.00	108.52	103.58	111.42	115.32	73.39	111.26	100.90	114.62	119.97	120.33	114.12	94.49	115.51
-2.50 to -2.00; 4 mm	77.65	71.78	84.99	75.98	80.07	77.00	69.90	69.00	76.91	64.87	76.27	69.43	68.19	81.44	83.25
-2.00 to -1.50; 2.8 mm	0.31	0.00	0.15	0.07	0.31	0.00	0.05	0.00	0.20	0.00	1.73	0.23	0.04	0.59	0.00
-1.50 to -1.00; 2 mm	0.00	0.00	0.05	0.02	0.01	0.00	0.02	0.03	0.06	0.00	0.00	0.00	0.00	0.00	0.00
-1.00 to -0.50; 1.4 mm	0.00	0.00	0.02	0.01	0.00	0.00	0.00	0.13	0.01	0.00	0.00	0.07	0.02	0.00	0.00
-0.50 to 0.00; 1 mm	0.05	0.04	0.02	0.01	0.00	0.19	0.02	0.73	0.01	0.17	0.13	0.31	0.03	0.03	0.00
Total	229.04	233.35	245.73	235.13	248.67	249.24	182.96	236.62	231.13	241.08	248.77	248.03	230.84	228.27	248.40
Summary Data															
< 0.00; >1 mm	229.04	233.35	245.73	235.13	248.67	249.24	182.96	236.62	231.13	241.08	248.77	248.03	230.84	228.27	248.40
> 0.00; <1 mm	630.00	602.39	681.09	659.48	-	717.61	536.04	-	666.86	-	675.83	687.94	645.92	621.92	687.88
Total Sample Weight	859.04	835.74	926.82	894.61	248.67	966.85	719.00	236.62	897.99	241.08	924.60	935.97	876.76	850.19	936.28

- Data not provided

PARTICIPANT DATA

Table 7. Summary of final laser data for the participants for sediment distributed as PS61.

Phi interval; (sieve mesh (µm))	Benchmark Average	PSA_2301	PSA_2302	PSA_2303	PSA_2304	PSA_2305	PSA_2306	PSA_2307	PSA_2308	PSA_2309	PSA_2310	PSA_2311	PSA_2312	PSA_2313	PSA_2320
0.00 to 0.50; (707 µm)	20.01	19.88	21.06	17.84	12.08	9.08	15.95	14.34	14.25	1.95	20.14	16.38	14.76	19.63	14.82
0.50 to 1.00; (500 µm)	28.70	28.11	28.98	25.87	19.00	16.86	27.92	26.90	25.17	7.99	27.96	26.20	25.21	28.68	26.95
1.00 to 1.50; (353.6 µm)	28.29	27.83	27.61	28.76	19.61	32.40	29.13	28.85	27.61	14.31	26.13	25.95	27.56	28.52	29.23
1.50 to 2.00; (250 µm)	15.02	17.79	14.47	16.32	11.27	28.85	19.26	18.25	19.37	16.12	17.06	15.65	18.80	15.24	19.68
2.00 to 2.50; (176.8 µm)	4.07	6.04	3.91	4.86	3.01	8.32	7.12	6.03	7.52	12.53	6.03	4.99	7.26	4.07	7.25
2.50 to 3.00; (125 µm)	1.50	0.35	1.48	1.87	1.25	2.83	0.61	0.56	1.57	7.13	0.80	0.58	1.11	1.45	0.64
3.00 to 3.50; (88.39 µm)	0.57	0.00	0.57	0.81	0.45	1.12	0.00	0.07	0.40	3.22	0.01	0.14	0.13	0.57	0.00
3.50 to 4.00; (62.5 µm)	0.20	0.00	0.19	0.42	0.17	0.40	0.00	0.38	0.88	1.41	0.38	0.66	0.56	0.19	0.00
4.00 to 4.50; (44.19 µm)	0.11	0.00	0.11	0.28	0.08	0.16	0.00	0.37	0.66	0.83	0.48	0.78	0.35	0.11	0.00
4.50 to 5.00; (31.25 µm)	0.10	0.00	0.10	0.24	0.08	0.00	0.00	0.24	0.31	0.65	0.11	0.52	0.00	0.10	0.00
5.00 to 5.50; (22.097 µm)	0.09	0.00	0.09	0.24	0.07	0.00	0.00	0.24	0.16	0.58	0.00	0.46	0.00	0.09	0.00
5.50 to 6.00; (15.625 µm)	0.10	0.00	0.10	0.26	0.08	0.00	0.00	0.38	0.32	0.60	0.03	0.66	0.00	0.10	0.18
6.00 to 6.50; (11.049 µm)	0.11	0.00	0.12	0.28	0.09	0.00	0.00	0.53	0.40	0.71	0.16	0.92	0.00	0.11	0.29
6.50 to 7.00; (7.813 µm)	0.12	0.00	0.13	0.27	0.10	0.00	0.00	0.63	0.41	0.81	0.22	1.09	0.00	0.12	0.29
7.00 to 7.50; (5.524 µm)	0.13	0.00	0.14	0.27	0.11	0.00	0.00	0.69	0.41	0.87	0.22	1.16	0.00	0.13	0.25
7.50 to 8.00; (3.906 µm)	0.12	0.00	0.13	0.25	0.10	0.00	0.00	0.64	0.38	0.84	0.19	1.10	0.00	0.12	0.20
8.00 to 8.50; (2.762 µm)	0.10	0.00	0.11	0.21	0.08	0.00	0.00	0.53	0.18	0.74	0.08	0.94	0.00	0.10	0.18
8.50 to 9.00; (1.953 µm)	0.09	0.00	0.09	0.18	0.07	0.00	0.00	0.33	0.00	0.58	0.01	0.70	0.00	0.08	0.04
9.00 to 9.50; (1.381 µm)	0.09	0.00	0.10	0.17	0.07	0.00	0.00	0.03	0.00	0.41	0.00	0.47	0.00	0.09	0.00
9.50 to 10.00; (0.977 µm)	0.09	0.00	0.10	0.15	0.07	0.00	0.00	0.00	0.00	0.29	0.00	0.32	0.00	0.09	0.00
10.00 to 10.50; (0.691 µm)	0.09	0.00	0.10	0.12	0.07	0.00	0.00	0.00	0.00	0.21	0.00	0.17	0.00	0.09	0.00
10.50 to 11.00; (0.488 µm)	0.08	0.00	0.09	0.10	0.06	0.00	0.00	0.00	0.00	0.12	0.00	0.12	0.00	0.08	0.00
11.00 to 11.50; (0.345 µm)	0.07	0.00	0.07	0.08	0.05	0.00	0.00	0.00	0.00	0.01	0.00	0.03	0.00	0.07	0.00
11.50 to 12.00; (0.244 µm)	0.06	0.00	0.06	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.00
12.00 to 12.50; (0.173 µm)	0.04	0.00	0.05	0.04	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00
12.50 to 13.00; (0.122 µm)	0.03	0.00	0.04	0.03	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00
13.00 to 13.50; (0.086 µm)	0.02	0.00	0.02	0.03	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00
Total	100.00	100.00	100.00	100.00	68.12	100.00	100.00	100.00	100.00	72.90	100.00	100.00	95.74	100.00	100.00

Figure 3. Particle size distribution curves from all participating laboratories and the Benchmark Average for sediment distributed as PS61.

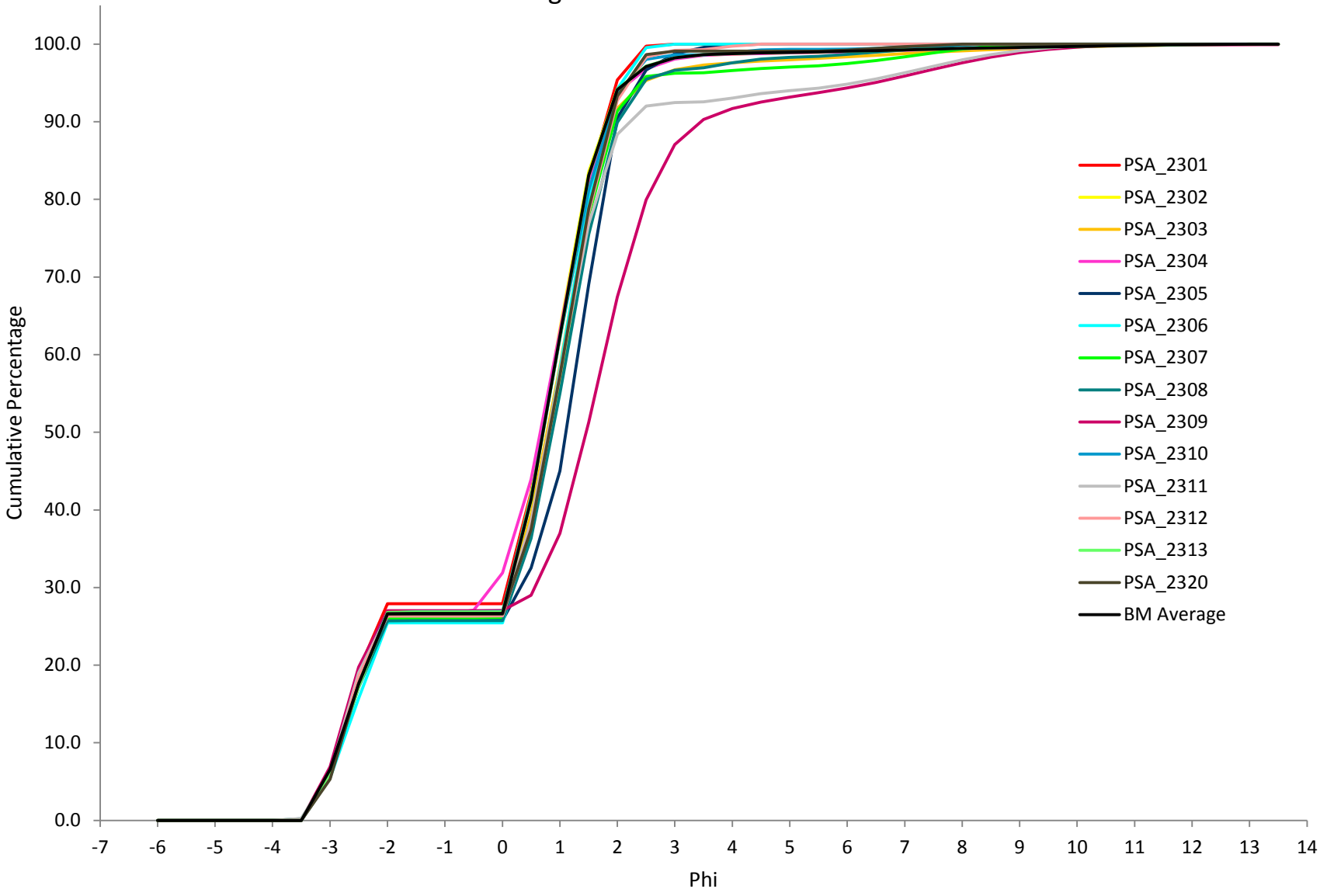


Figure 4. Bar chart showing the percentage gravel, sand, silt and clay recorded by each participating laboratory and the benchmark average for PS61.

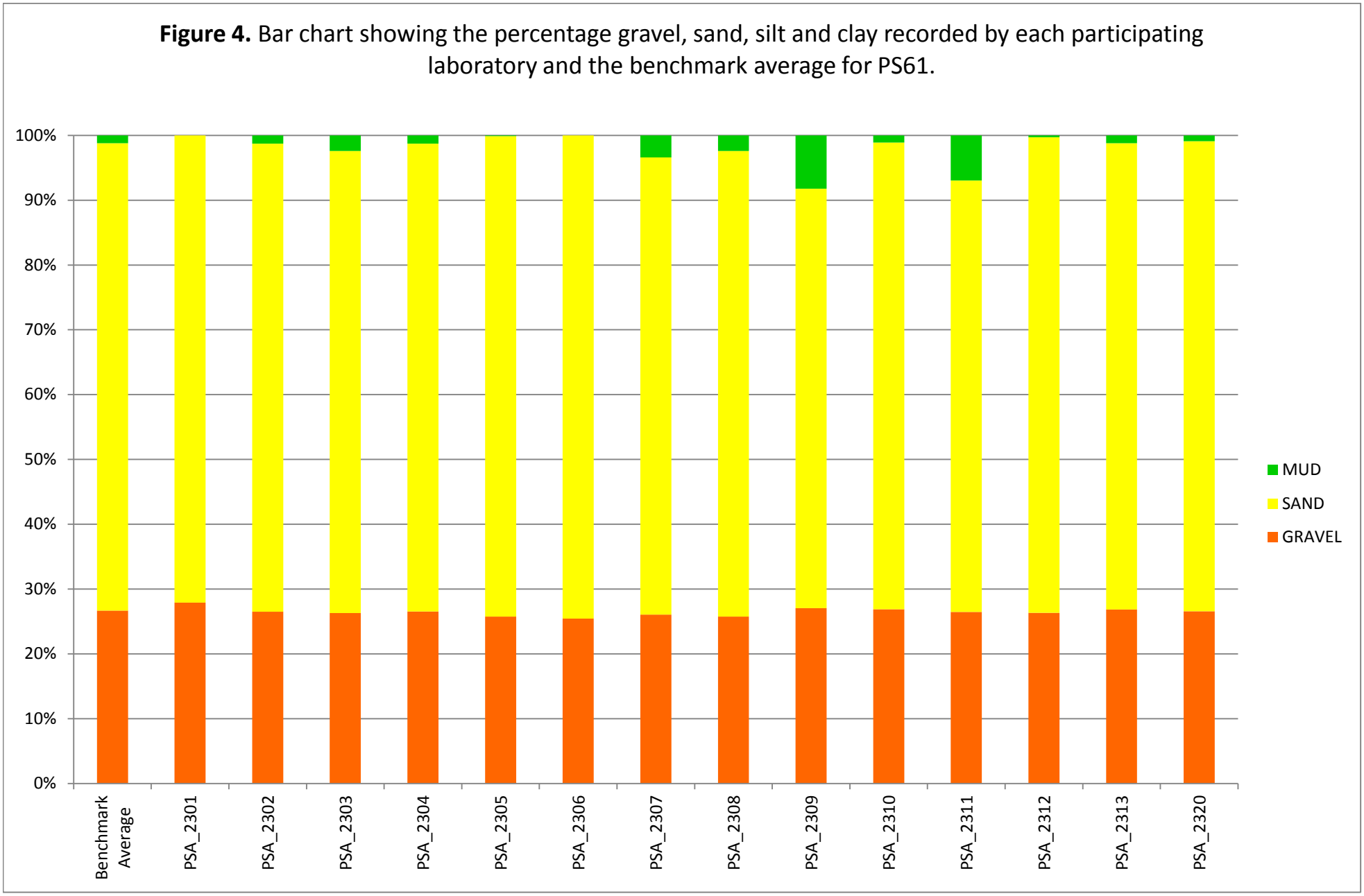


Figure 5. Bar chart showing the sieve weights recorded by each participating laboratory and the benchmark average for PS61.

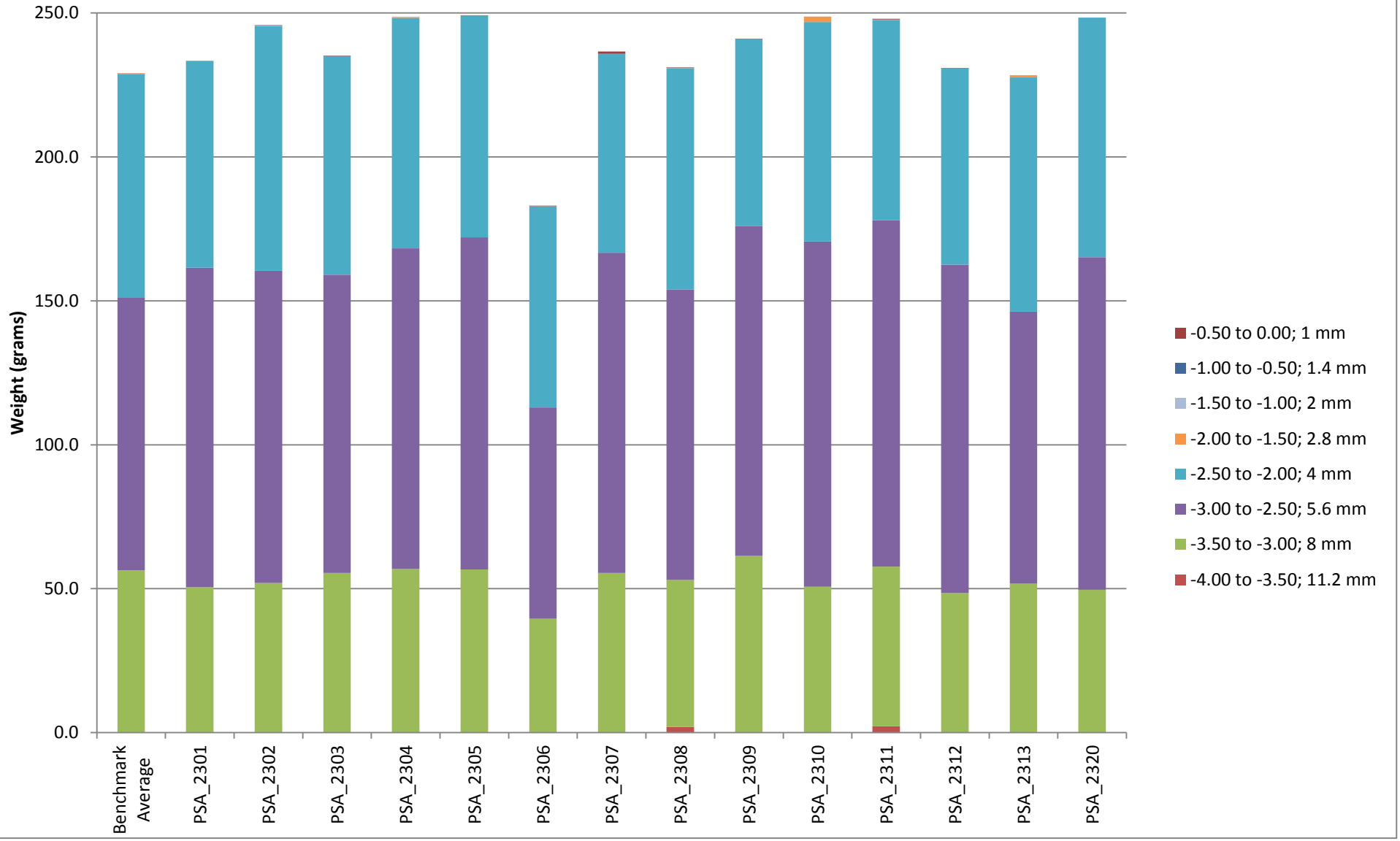
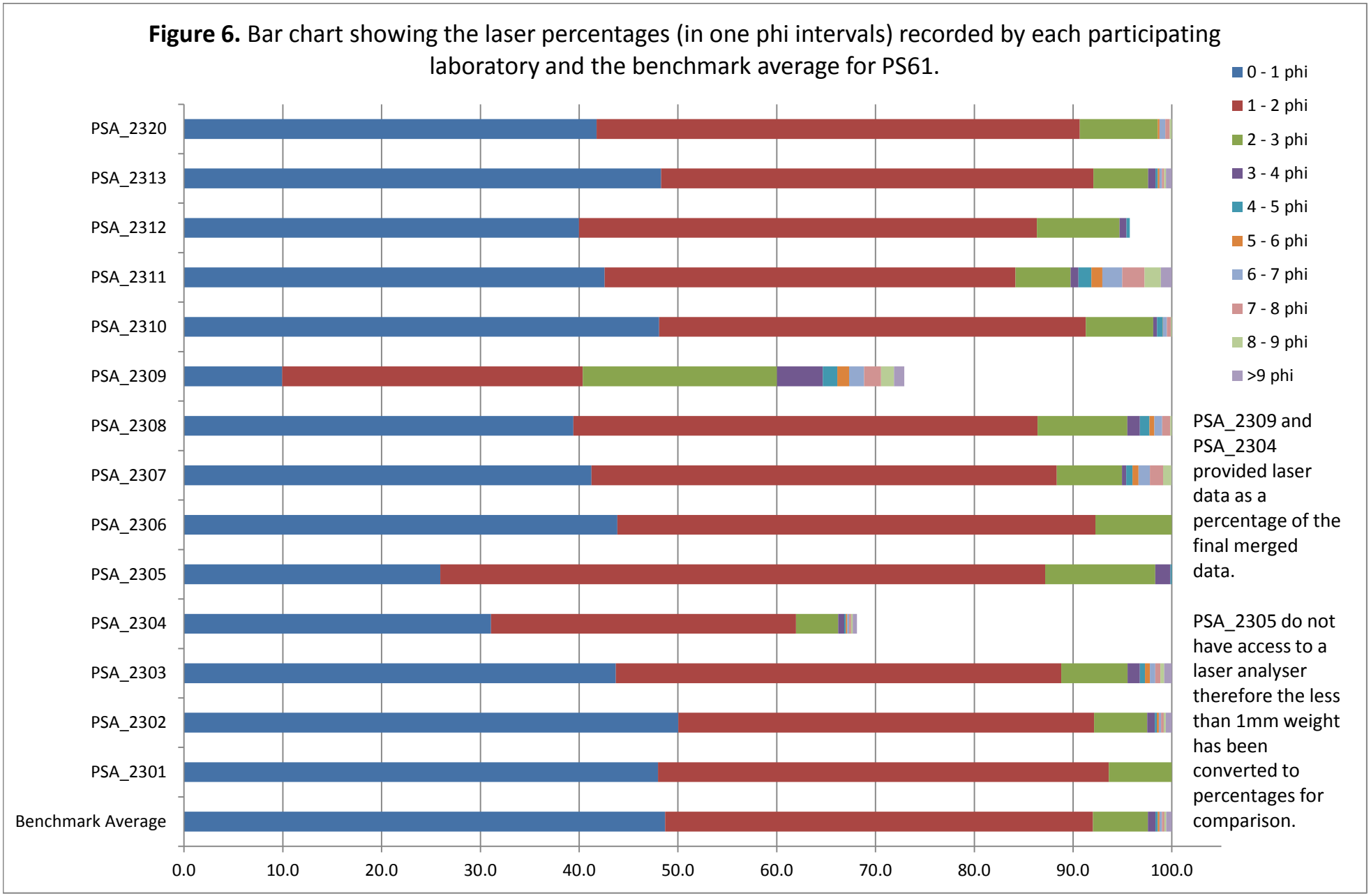


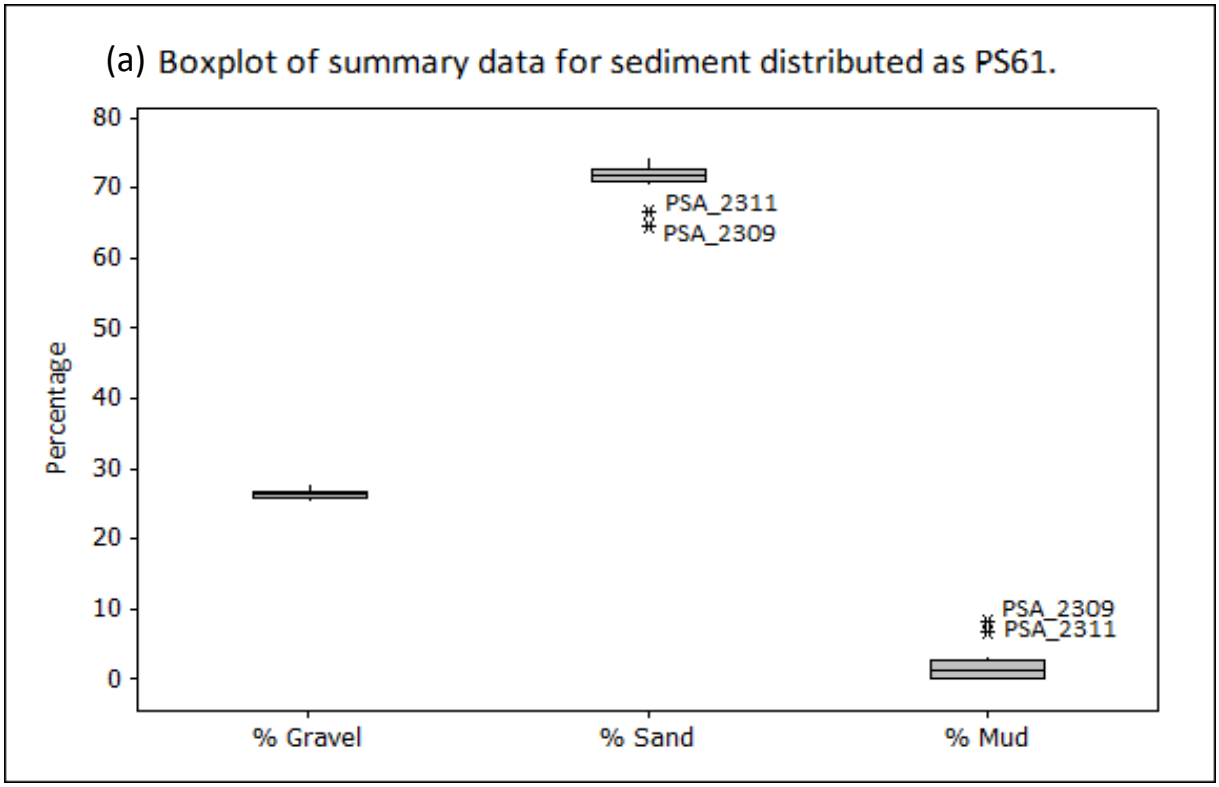
Figure 6. Bar chart showing the laser percentages (in one phi intervals) recorded by each participating laboratory and the benchmark average for PS61.

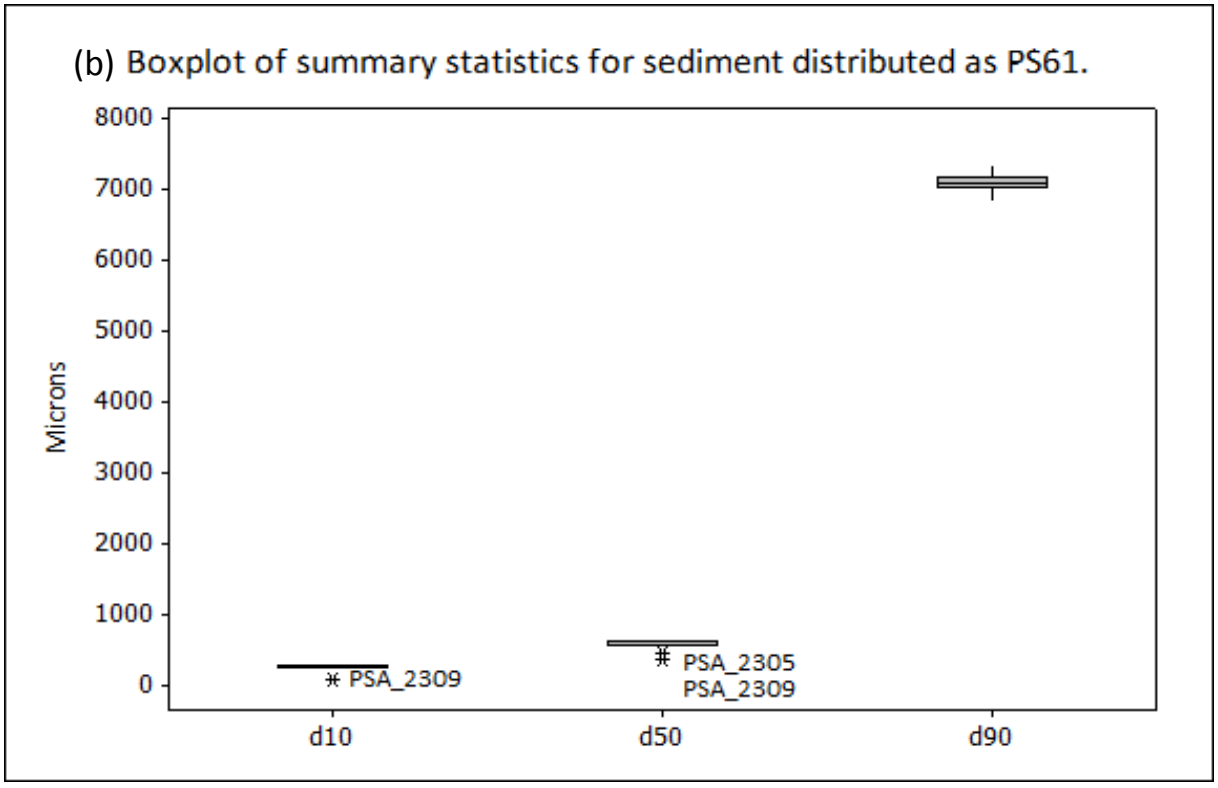


PSA_2309 and PSA_2304 provided laser data as a percentage of the final merged data.

PSA_2305 do not have access to a laser analyser therefore the less than 1mm weight has been converted to percentages for comparison.

Figure 7. Boxplots of (a) summary data and (b) summary statistics for sediment distributed as PS61.





APPENDICIES

NMBAQCS - PS Exercise Data Workbook (Page 2 - Final Merged Data Submission)	Return to APEM Ltd. By 29-07-16

Exercise Code:	PS61
LabCode:	PSA_2301_A
Sample Code:	PS612301_A

Phi interval (explicit) + sieve mesh (theoretical sieves shown in brackets)	Percentage	Grams
	(mark as "0" for no material or not analysed)	
-6.50 to -6.00; 63 mm	0.0000	0.0000
-6.00 to -5.50; 45 mm	0.0000	0.0000
-5.50 to -5.00; 31.5 mm	0.0000	0.0000
-5.00 to -4.50; 22.4 mm	0.0000	0.0000
-4.50 to -4.00; 16 mm	0.0000	0.0000
-4.00 to -3.50; 11.2 mm	0.0000	0.0000
-3.50 to -3.00; 8 mm	6.1139	51.0970
-3.00 to -2.50; 5.6 mm	13.5831	113.5210
-2.50 to -2.00; 4 mm	8.2094	68.6100
-2.00 to -1.50; 2.8 mm	0.0098	0.0820
-1.50 to -1.00; 2 mm	0.0000	0.0000
-1.00 to -0.50; 1.4 mm	0.0000	0.0000
-0.50 to 0.00; 1 mm	0.0081	0.0680
0.00 to 0.50; (707 µm)	14.6896	122.7688
0.50 to 1.00; (500 µm)	20.3423	170.0106
1.00 to 1.50; (353.6 µm)	19.9051	166.3572
1.50 to 2.00; (250 µm)	12.6356	105.6020
2.00 to 2.50; (176.8 µm)	4.2628	35.6265
2.50 to 3.00; (125 µm)	0.2402	2.0078
3.00 to 3.50; (88.39 µm)	0.0000	0.0000
3.50 to 4.00; (62.5 µm)	0.0000	0.0000
4.00 to 4.50; (44.19 µm)	0.0000	0.0000
4.50 to 5.00; (31.25 µm)	0.0000	0.0000
5.00 to 5.50; (22.097 µm)	0.0000	0.0000
5.50 to 6.00; (15.625 µm)	0.0000	0.0000
6.00 to 6.50; (11.049 µm)	0.0000	0.0000
6.50 to 7.00; (7.813 µm)	0.0000	0.0000
7.00 to 7.50; (5.524 µm)	0.0000	0.0000
7.50 to 8.00; (3.906 µm)	0.0000	0.0000
8.00 to 8.50; (2.762 µm)	0.0000	0.0000
8.50 to 9.00; (1.953 µm)	0.0000	0.0000
9.00 to 9.50; (1.381 µm)	0.0000	0.0000
9.50 to 10.00; (0.977 µm)	0.0000	0.0000
10.00 to 10.50; (0.691 µm)	0.0000	0.0000
10.50 to 11.00; (0.488 µm)	0.0000	0.0000
11.00 to 11.50; (0.345 µm)	0.0000	0.0000
11.50 to 12.00; (0.244 µm)	0.0000	0.0000
12.00 to 12.50; (0.173 µm)	0.0000	0.0000
12.50 to 13.00; (0.122 µm)	0.0000	0.0000
13.00 to 13.50; (0.086 µm)	0.0000	0.0000

NMBAQCS - PS Exercise Data Workbook (Page 2 - Final Merged Data Submission)	Return to APEM Ltd. By 29-07-16

Exercise Code:	PS61
LabCode:	PSA_2301_B
Sample Code:	PS612301_B

Phi interval (explicit) + sieve mesh (theoretical sieves shown in brackets)	Percentage	Grams
	(mark as "0" for no material or not analysed)	
-6.50 to -6.00; 63 mm	0.0000	0.0000
-6.00 to -5.50; 45 mm	0.0000	0.0000
-5.50 to -5.00; 31.5 mm	0.0000	0.0000
-5.00 to -4.50; 22.4 mm	0.0000	0.0000
-4.50 to -4.00; 16 mm	0.0000	0.0000
-4.00 to -3.50; 11.2 mm	0.0000	0.0000
-3.50 to -3.00; 8 mm	6.0454	50.5240
-3.00 to -2.50; 5.6 mm	13.2822	111.0040
-2.50 to -2.00; 4 mm	8.5891	71.7820
-2.00 to -1.50; 2.8 mm	0.0000	0.0000
-1.50 to -1.00; 2 mm	0.0000	0.0000
-1.00 to -0.50; 1.4 mm	0.0000	0.0000
-0.50 to 0.00; 1 mm	0.0045	0.0380
0.00 to 0.50; (707 µm)	14.3284	119.7475
0.50 to 1.00; (500 µm)	20.2573	169.2977
1.00 to 1.50; (353.6 µm)	20.0618	167.6639
1.50 to 2.00; (250 µm)	12.8228	107.1653
2.00 to 2.50; (176.8 µm)	4.3542	36.3894
2.50 to 3.00; (125 µm)	0.2544	2.1262
3.00 to 3.50; (88.39 µm)	0.0000	0.0000
3.50 to 4.00; (62.5 µm)	0.0000	0.0000
4.00 to 4.50; (44.19 µm)	0.0000	0.0000
4.50 to 5.00; (31.25 µm)	0.0000	0.0000
5.00 to 5.50; (22.097 µm)	0.0000	0.0000
5.50 to 6.00; (15.625 µm)	0.0000	0.0000
6.00 to 6.50; (11.049 µm)	0.0000	0.0000
6.50 to 7.00; (7.813 µm)	0.0000	0.0000
7.00 to 7.50; (5.524 µm)	0.0000	0.0000
7.50 to 8.00; (3.906 µm)	0.0000	0.0000
8.00 to 8.50; (2.762 µm)	0.0000	0.0000
8.50 to 9.00; (1.953 µm)	0.0000	0.0000
9.00 to 9.50; (1.381 µm)	0.0000	0.0000
9.50 to 10.00; (0.977 µm)	0.0000	0.0000
10.00 to 10.50; (0.691 µm)	0.0000	0.0000
10.50 to 11.00; (0.488 µm)	0.0000	0.0000
11.00 to 11.50; (0.345 µm)	0.0000	0.0000
11.50 to 12.00; (0.244 µm)	0.0000	0.0000
12.00 to 12.50; (0.173 µm)	0.0000	0.0000
12.50 to 13.00; (0.122 µm)	0.0000	0.0000
13.00 to 13.50; (0.086 µm)	0.0000	0.0000

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Exercise Code:	PS61
LabCode:	PSA_2302
Sample Code:	PS612302

Phi interval (explicit) + sieve mesh (theoretical sieves shown in brackets)	Percentage (mark as "0" for no material or not analysed)	Grams (mark as "0" for no material or not analysed)
-6.50 to -6.00; 63 mm	0.0000	0.0000
-6.00 to -5.50; 45 mm	0.0000	0.0000
-5.50 to -5.00; 31.5 mm	0.0000	0.0000
-5.00 to -4.50; 22.4 mm	0.0000	0.0000
-4.50 to -4.00; 16 mm	0.0000	0.0000
-4.00 to -3.50; 11.2 mm	0.0000	0.0000
-3.50 to -3.00; 8 mm	5.6084	51.9800
-3.00 to -2.50; 5.6 mm	11.7089	108.5200
-2.50 to -2.00; 4 mm	9.1701	84.9900
-2.00 to -1.50; 2.8 mm	0.0162	0.1500
-1.50 to -1.00; 2 mm	0.0054	0.0500
-1.00 to -0.50; 1.4 mm	0.0022	0.0200
-0.50 to 0.00; 1 mm	0.0022	0.0200
0.00 to 0.50; (707 µm)	15.4730	143.4072
0.50 to 1.00; (500 µm)	21.2941	197.3578
1.00 to 1.50; (353.6 µm)	20.2905	188.0562
1.50 to 2.00; (250 µm)	10.6341	98.5591
2.00 to 2.50; (176.8 µm)	2.8750	26.6457
2.50 to 3.00; (125 µm)	1.0898	10.1004
3.00 to 3.50; (88.39 µm)	0.4185	3.8791
3.50 to 4.00; (62.5 µm)	0.1409	1.3060
4.00 to 4.50; (44.19 µm)	0.0800	0.7417
4.50 to 5.00; (31.25 µm)	0.0737	0.6832
5.00 to 5.50; (22.097 µm)	0.0660	0.6117
5.50 to 6.00; (15.625 µm)	0.0748	0.6930
6.00 to 6.50; (11.049 µm)	0.0846	0.7843
6.50 to 7.00; (7.813 µm)	0.0931	0.8630
7.00 to 7.50; (5.524 µm)	0.1003	0.9295
7.50 to 8.00; (3.906 µm)	0.0967	0.8958
8.00 to 8.50; (2.762 µm)	0.0803	0.7442
8.50 to 9.00; (1.953 µm)	0.0693	0.6421
9.00 to 9.50; (1.381 µm)	0.0707	0.6551
9.50 to 10.00; (0.977 µm)	0.0737	0.6835
10.00 to 10.50; (0.691 µm)	0.0703	0.6517
10.50 to 11.00; (0.488 µm)	0.0627	0.5815
11.00 to 11.50; (0.345 µm)	0.0534	0.4952
11.50 to 12.00; (0.244 µm)	0.0440	0.4077
12.00 to 12.50; (0.173 µm)	0.0339	0.3144
12.50 to 13.00; (0.122 µm)	0.0260	0.2406
13.00 to 13.50; (0.086 µm)	0.0173	0.1602

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Exercise Code:	PS61
LabCode:	PSA_2303
Sample Code:	PS612303

Phi interval (explicit) + sieve mesh (theoretical sieves shown in brackets)	Percentage (mark as "0" for no material or not analysed)	Grams (mark as "0" for no material or not analysed)
-6.50 to -6.00; 63 mm	0.00	0.00
-6.00 to -5.50; 45 mm	0.00	0.00
-5.50 to -5.00; 31.5 mm	0.00	0.00
-5.00 to -4.50; 22.4 mm	0.00	0.00
-4.50 to -4.00; 16 mm	0.00	0.00
-4.00 to -3.50; 11.2 mm	0.00	0.00
-3.50 to -3.00; 8 mm	6.20	55.46
-3.00 to -2.50; 5.6 mm	11.58	103.58
-2.50 to -2.00; 4 mm	8.49	75.98
-2.00 to -1.50; 2.8 mm	0.01	0.07
-1.50 to -1.00; 2 mm	0.00	0.02
-1.00 to -0.50; 1.4 mm	0.00	0.01
-0.50 to 0.00; 1 mm	0.00	0.01
0.00 to 0.50; (707 µm)	13.15	117.65
0.50 to 1.00; (500 µm)	19.07	170.61
1.00 to 1.50; (353.6 µm)	21.20	189.65
1.50 to 2.00; (250 µm)	12.03	107.65
2.00 to 2.50; (176.8 µm)	3.58	32.03
2.50 to 3.00; (125 µm)	1.38	12.36
3.00 to 3.50; (88.39 µm)	0.60	5.37
3.50 to 4.00; (62.5 µm)	0.31	2.75
4.00 to 4.50; (44.19 µm)	0.20	1.82
4.50 to 5.00; (31.25 µm)	0.18	1.60
5.00 to 5.50; (22.097 µm)	0.18	1.61
5.50 to 6.00; (15.625 µm)	0.19	1.70
6.00 to 6.50; (11.049 µm)	0.21	1.86
6.50 to 7.00; (7.813 µm)	0.20	1.79
7.00 to 7.50; (5.524 µm)	0.20	1.76
7.50 to 8.00; (3.906 µm)	0.18	1.64
8.00 to 8.50; (2.762 µm)	0.15	1.37
8.50 to 9.00; (1.953 µm)	0.13	1.19
9.00 to 9.50; (1.381 µm)	0.12	1.09
9.50 to 10.00; (0.977 µm)	0.11	0.96
10.00 to 10.50; (0.691 µm)	0.09	0.80
10.50 to 11.00; (0.488 µm)	0.07	0.64
11.00 to 11.50; (0.345 µm)	0.06	0.50
11.50 to 12.00; (0.244 µm)	0.04	0.39
12.00 to 12.50; (0.173 µm)	0.03	0.29
12.50 to 13.00; (0.122 µm)	0.02	0.21
13.00 to 13.50; (0.086 µm)	0.02	0.22

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Exercise Code:	PS61
LabCode:	PSA_2304
Sample Code:	PS612304

Phi interval (explicit) + sieve mesh (theoretical sieves shown in brackets)	Percentage (mark as "0" for no material or not analysed)	Grams (mark as "0" for no material or not analysed)
-6.50 to -6.00; 63 mm	0.0000	0.0000
-6.00 to -5.50; 45 mm	0.0000	0.0000
-5.50 to -5.00; 31.5 mm	0.0000	0.0000
-5.00 to -4.50; 22.4 mm	0.0000	0.0000
-4.50 to -4.00; 16 mm	0.0000	0.0000
-4.00 to -3.50; 11.2 mm	0.0000	0.0000
-3.50 to -3.00; 8 mm	6.0671	56.8600
-3.00 to -2.50; 5.6 mm	11.8887	111.4200
-2.50 to -2.00; 4 mm	8.5436	80.0700
-2.00 to -1.50; 2.8 mm	0.0331	0.3100
-1.50 to -1.00; 2 mm	0.0011	0.0100
-1.00 to -0.50; 1.4 mm	0.5482	5.1379
-0.50 to 0.00; 1 mm	4.7852	44.8461
0.00 to 0.50; (707 µm)	12.0766	113.1803
0.50 to 1.00; (500 µm)	19.0036	178.1002
1.00 to 1.50; (353.6 µm)	19.6094	183.7777
1.50 to 2.00; (250 µm)	11.2733	105.6527
2.00 to 2.50; (176.8 µm)	3.0062	28.1734
2.50 to 3.00; (125 µm)	1.2538	11.7509
3.00 to 3.50; (88.39 µm)	0.4507	4.2238
3.50 to 4.00; (62.5 µm)	0.1677	1.5717
4.00 to 4.50; (44.19 µm)	0.0848	0.7943
4.50 to 5.00; (31.25 µm)	0.0805	0.7546
5.00 to 5.50; (22.097 µm)	0.0677	0.6342
5.50 to 6.00; (15.625 µm)	0.0755	0.7074
6.00 to 6.50; (11.049 µm)	0.0923	0.8651
6.50 to 7.00; (7.813 µm)	0.0963	0.9023
7.00 to 7.50; (5.524 µm)	0.1077	1.0090
7.50 to 8.00; (3.906 µm)	0.0959	0.8992
8.00 to 8.50; (2.762 µm)	0.0830	0.7778
8.50 to 9.00; (1.953 µm)	0.0659	0.6175
9.00 to 9.50; (1.381 µm)	0.0703	0.6588
9.50 to 10.00; (0.977 µm)	0.0685	0.6420
10.00 to 10.50; (0.691 µm)	0.0663	0.6210
10.50 to 11.00; (0.488 µm)	0.0603	0.5650
11.00 to 11.50; (0.345 µm)	0.0503	0.4711
11.50 to 12.00; (0.244 µm)	0.0424	0.3972
12.00 to 12.50; (0.173 µm)	0.0311	0.2915
12.50 to 13.00; (0.122 µm)	0.0261	0.2449
13.00 to 13.50; (0.086 µm)	0.0269	0.2525

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Exercise Code:	PS61
LabCode:	PSA_2305
Sample Code:	PS612305

Phi interval (explicit) + sieve mesh (theoretical sieves shown in brackets)	Percentage (mark as "0" for no material or not analysed)	Grams (mark as "0" for no material or not analysed)
-6.50 to -6.00; 63 mm	0.0000	0.0000
-6.00 to -5.50; 45 mm	0.0000	0.0000
-5.50 to -5.00; 31.5 mm	0.0000	0.0000
-5.00 to -4.50; 22.4 mm	0.0000	0.0000
-4.50 to -4.00; 16 mm	0.0000	0.0000
-4.00 to -3.50; 11.2 mm	0.0000	0.0000
-3.50 to -3.00; 8 mm	5.8665	56.7200
-3.00 to -2.50; 5.6 mm	11.9276	115.3220
-2.50 to -2.00; 4 mm	7.9644	77.0040
-2.00 to -1.50; 2.8 mm	0.0000	0.0000
-1.50 to -1.00; 2 mm	0.0000	0.0000
-1.00 to -0.50; 1.4 mm	0.0000	0.0000
-0.50 to 0.00; 1 mm	0.0200	0.1930
0.00 to 0.50; (707 µm)	6.7356	65.1230
0.50 to 1.00; (500 µm)	12.5114	120.9660
1.00 to 1.50; (353.6 µm)	24.0442	232.4710
1.50 to 2.00; (250 µm)	21.4125	207.0260
2.00 to 2.50; (176.8 µm)	6.1719	59.6730
2.50 to 3.00; (125 µm)	2.1021	20.3240
3.00 to 3.50; (88.39 µm)	0.8304	8.0290
3.50 to 4.00; (62.5 µm)	0.2978	2.8790
4.00 to 4.50; (44.19 µm)	0.1155	1.1170
4.50 to 5.00; (31.25 µm)	0.0000	0.0000
5.00 to 5.50; (22.097 µm)	0.0000	0.0000
5.50 to 6.00; (15.625 µm)	0.0000	0.0000
6.00 to 6.50; (11.049 µm)	0.0000	0.0000
6.50 to 7.00; (7.813 µm)	0.0000	0.0000
7.00 to 7.50; (5.524 µm)	0.0000	0.0000
7.50 to 8.00; (3.906 µm)	0.0000	0.0000
8.00 to 8.50; (2.762 µm)	0.0000	0.0000
8.50 to 9.00; (1.953 µm)	0.0000	0.0000
9.00 to 9.50; (1.381 µm)	0.0000	0.0000
9.50 to 10.00; (0.977 µm)	0.0000	0.0000
10.00 to 10.50; (0.691 µm)	0.0000	0.0000
10.50 to 11.00; (0.488 µm)	0.0000	0.0000
11.00 to 11.50; (0.345 µm)	0.0000	0.0000
11.50 to 12.00; (0.244 µm)	0.0000	0.0000
12.00 to 12.50; (0.173 µm)	0.0000	0.0000
12.50 to 13.00; (0.122 µm)	0.0000	0.0000
13.00 to 13.50; (0.086 µm)	0.0000	0.0000

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Exercise Code:	PS61
LabCode:	PSA_2306
Sample Code:	PS612306

Phi interval (explicit) + sieve mesh (theoretical sieves shown in brackets)	Percentage (mark as "0" for no material or not analysed)	Grams
-6.50 to -6.00; 63 mm	0.0000	
-6.00 to -5.50; 45 mm	0.0000	
-5.50 to -5.00; 31.5 mm	0.0000	
-5.00 to -4.50; 22.4 mm	0.0000	
-4.50 to -4.00; 16 mm	0.0000	
-4.00 to -3.50; 11.2 mm	0.0000	
-3.50 to -3.00; 8 mm	5.5040	
-3.00 to -2.50; 5.6 mm	10.2066	
-2.50 to -2.00; 4 mm	9.7223	
-2.00 to -1.50; 2.8 mm	0.0076	
-1.50 to -1.00; 2 mm	0.0031	
-1.00 to -0.50; 1.4 mm	0.0006	
-0.50 to 0.00; 1 mm	0.0026	
0.00 to 0.50; (707 µm)	11.8943	
0.50 to 1.00; (500 µm)	20.8145	
1.00 to 1.50; (353.6 µm)	21.7182	
1.50 to 2.00; (250 µm)	14.3595	
2.00 to 2.50; (176.8 µm)	5.3083	
2.50 to 3.00; (125 µm)	0.4584	
3.00 to 3.50; (88.39 µm)	0.0000	
3.50 to 4.00; (62.5 µm)	0.0000	
4.00 to 4.50; (44.19 µm)	0.0000	
4.50 to 5.00; (31.25 µm)	0.0000	
5.00 to 5.50; (22.097 µm)	0.0000	
5.50 to 6.00; (15.625 µm)	0.0000	
6.00 to 6.50; (11.049 µm)	0.0000	
6.50 to 7.00; (7.813 µm)	0.0000	
7.00 to 7.50; (5.524 µm)	0.0000	
7.50 to 8.00; (3.906 µm)	0.0000	
8.00 to 8.50; (2.762 µm)	0.0000	
8.50 to 9.00; (1.953 µm)	0.0000	
9.00 to 9.50; (1.381 µm)	0.0000	
9.50 to 10.00; (0.977 µm)	0.0000	
10.00 to 10.50; (0.691 µm)	0.0000	
10.50 to 11.00; (0.488 µm)	0.0000	
11.00 to 11.50; (0.345 µm)	0.0000	
11.50 to 12.00; (0.244 µm)	0.0000	
12.00 to 12.50; (0.173 µm)	0.0000	
12.50 to 13.00; (0.122 µm)	0.0000	
13.00 to 13.50; (0.086 µm)	0.0000	

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Exercise Code:	PS61
LabCode:	PSA_2307
Sample Code:	PS612307

Phi interval (explicit) + sieve mesh (theoretical sieves shown in brackets)	Percentage (mark as "0" for no material or not analysed)	Grams
-6.50 to -6.00; 63 mm	0.0000	
-6.00 to -5.50; 45 mm	0.0000	
-5.50 to -5.00; 31.5 mm	0.0000	
-5.00 to -4.50; 22.4 mm	0.0000	
-4.50 to -4.00; 16 mm	0.0000	
-4.00 to -3.50; 11.2 mm	0.0000	
-3.50 to -3.00; 8 mm	6.1290	
-3.00 to -2.50; 5.6 mm	12.2940	
-2.50 to -2.00; 4 mm	7.6240	
-2.00 to -1.50; 2.8 mm	0.0000	
-1.50 to -1.00; 2 mm	0.0030	
-1.00 to -0.50; 1.4 mm	0.0140	
-0.50 to 0.00; 1 mm	0.0810	
0.00 to 0.50; (707 µm)	10.5920	
0.50 to 1.00; (500 µm)	19.8650	
1.00 to 1.50; (353.6 µm)	21.3100	
1.50 to 2.00; (250 µm)	13.4800	
2.00 to 2.50; (176.8 µm)	4.4570	
2.50 to 3.00; (125 µm)	0.4140	
3.00 to 3.50; (88.39 µm)	0.0500	
3.50 to 4.00; (62.5 µm)	0.2780	
4.00 to 4.50; (44.19 µm)	0.2760	
4.50 to 5.00; (31.25 µm)	0.1800	
5.00 to 5.50; (22.097 µm)	0.1780	
5.50 to 6.00; (15.625 µm)	0.2780	
6.00 to 6.50; (11.049 µm)	0.3890	
6.50 to 7.00; (7.813 µm)	0.4680	
7.00 to 7.50; (5.524 µm)	0.5080	
7.50 to 8.00; (3.906 µm)	0.4750	
8.00 to 8.50; (2.762 µm)	0.3930	
8.50 to 9.00; (1.953 µm)	0.2450	
9.00 to 9.50; (1.381 µm)	0.0200	
9.50 to 10.00; (0.977 µm)	0.0000	
10.00 to 10.50; (0.691 µm)	0.0000	
10.50 to 11.00; (0.488 µm)	0.0000	
11.00 to 11.50; (0.345 µm)	0.0000	
11.50 to 12.00; (0.244 µm)	0.0000	
12.00 to 12.50; (0.173 µm)	0.0000	
12.50 to 13.00; (0.122 µm)	0.0000	
13.00 to 13.50; (0.086 µm)	0.0000	

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Exercise Code:	PS61
LabCode:	PSA_2308
Sample Code:	PS612308

Phi interval (explicit) + sieve mesh (theoretical sieves shown in brackets)	Percentage (mark as "0" for no material or not analysed)	Grams (mark as "0" for no material or not analysed)
-6.50 to -6.00; 63 mm	0.0000	0.0000
-6.00 to -5.50; 45 mm	0.0000	0.0000
-5.50 to -5.00; 31.5 mm	0.0000	0.0000
-5.00 to -4.50; 22.4 mm	0.0000	0.0000
-4.50 to -4.00; 16 mm	0.0000	0.0000
-4.00 to -3.50; 11.2 mm	0.2172	1.9500
-3.50 to -3.00; 8 mm	5.6894	51.0900
-3.00 to -2.50; 5.6 mm	11.2362	100.9000
-2.50 to -2.00; 4 mm	8.5647	76.9100
-2.00 to -1.50; 2.8 mm	0.0223	0.2000
-1.50 to -1.00; 2 mm	0.0067	0.0600
-1.00 to -0.50; 1.4 mm	0.0011	0.0100
-0.50 to 0.00; 1 mm	0.0011	0.0100
0.00 to 0.50; (707 µm)	10.5804	95.0106
0.50 to 1.00; (500 µm)	18.6914	167.8466
1.00 to 1.50; (353.6 µm)	20.5040	184.1235
1.50 to 2.00; (250 µm)	14.3857	129.1823
2.00 to 2.50; (176.8 µm)	5.5817	50.1231
2.50 to 3.00; (125 µm)	1.1642	10.4545
3.00 to 3.50; (88.39 µm)	0.2953	2.6515
3.50 to 4.00; (62.5 µm)	0.6499	5.8360
4.00 to 4.50; (44.19 µm)	0.4910	4.4091
4.50 to 5.00; (31.25 µm)	0.2322	2.0854
5.00 to 5.50; (22.097 µm)	0.1217	1.0931
5.50 to 6.00; (15.625 µm)	0.2404	2.1588
6.00 to 6.50; (11.049 µm)	0.2956	2.6544
6.50 to 7.00; (7.813 µm)	0.3031	2.7215
7.00 to 7.50; (5.524 µm)	0.3080	2.7657
7.50 to 8.00; (3.906 µm)	0.2852	2.5611
8.00 to 8.50; (2.762 µm)	0.1310	1.1766
8.50 to 9.00; (1.953 µm)	0.0007	0.0060
9.00 to 9.50; (1.381 µm)	0.0000	0.0000
9.50 to 10.00; (0.977 µm)	0.0000	0.0000
10.00 to 10.50; (0.691 µm)	0.0000	0.0000
10.50 to 11.00; (0.488 µm)	0.0000	0.0000
11.00 to 11.50; (0.345 µm)	0.0000	0.0000
11.50 to 12.00; (0.244 µm)	0.0000	0.0000
12.00 to 12.50; (0.173 µm)	0.0000	0.0000
12.50 to 13.00; (0.122 µm)	0.0000	0.0000
13.00 to 13.50; (0.086 µm)	0.0000	0.0000

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Exercise Code:	PS61
LabCode:	PSA_2309
Sample Code:	PS612309

Phi interval (explicit) + sieve mesh (theoretical sieves shown in brackets)	Percentage (mark as "0" for no material or not analysed)	Grams
-6.50 to -6.00; 63 mm	0.0000	
-6.00 to -5.50; 45 mm	0.0000	
-5.50 to -5.00; 31.5 mm	0.0000	
-5.00 to -4.50; 22.4 mm	0.0000	
-4.50 to -4.00; 16 mm	0.0000	
-4.00 to -3.50; 11.2 mm	0.0000	
-3.50 to -3.00; 8 mm	6.8902	
-3.00 to -2.50; 5.6 mm	12.8583	
-2.50 to -2.00; 4 mm	7.2772	
-2.00 to -1.50; 2.8 mm	0.0000	
-1.50 to -1.00; 2 mm	0.0000	
-1.00 to -0.50; 1.4 mm	0.0000	
-0.50 to 0.00; 1 mm	0.0191	
0.00 to 0.50; (707 µm)	1.9538	
0.50 to 1.00; (500 µm)	7.9900	
1.00 to 1.50; (353.6 µm)	14.3111	
1.50 to 2.00; (250 µm)	16.1179	
2.00 to 2.50; (176.8 µm)	12.5259	
2.50 to 3.00; (125 µm)	7.1308	
3.00 to 3.50; (88.39 µm)	3.2202	
3.50 to 4.00; (62.5 µm)	1.4146	
4.00 to 4.50; (44.19 µm)	0.8290	
4.50 to 5.00; (31.25 µm)	0.6474	
5.00 to 5.50; (22.097 µm)	0.5763	
5.50 to 6.00; (15.625 µm)	0.6044	
6.00 to 6.50; (11.049 µm)	0.7078	
6.50 to 7.00; (7.813 µm)	0.8141	
7.00 to 7.50; (5.524 µm)	0.8683	
7.50 to 8.00; (3.906 µm)	0.8433	
8.00 to 8.50; (2.762 µm)	0.7394	
8.50 to 9.00; (1.953 µm)	0.5792	
9.00 to 9.50; (1.381 µm)	0.4090	
9.50 to 10.00; (0.977 µm)	0.2873	
10.00 to 10.50; (0.691 µm)	0.2102	
10.50 to 11.00; (0.488 µm)	0.1166	
11.00 to 11.50; (0.345 µm)	0.0062	
11.50 to 12.00; (0.244 µm)	0.0000	
12.00 to 12.50; (0.173 µm)	0.0000	
12.50 to 13.00; (0.122 µm)	0.0000	
13.00 to 13.50; (0.086 µm)	0.0000	

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Exercise Code:	PS61
LabCode:	PSA_2310
Sample Code:	PS612310

Phi interval (explicit) + sieve mesh (theoretical sieves shown in brackets)	Percentage	Grams
	(mark as "0" for no material or not analysed)	
-6.50 to -6.00; 63 mm	0.0000	0.0000
-6.00 to -5.50; 45 mm	0.0000	0.0000
-5.50 to -5.00; 31.5 mm	0.0000	0.0000
-5.00 to -4.50; 22.4 mm	0.0000	0.0000
-4.50 to -4.00; 16 mm	0.0000	0.0000
-4.00 to -3.50; 11.2 mm	0.0000	0.0000
-3.50 to -3.00; 8 mm	5.4798	50.6667
-3.00 to -2.50; 5.6 mm	12.9750	119.9667
-2.50 to -2.00; 4 mm	8.2486	76.2667
-2.00 to -1.50; 2.8 mm	0.1875	1.7333
-1.50 to -1.00; 2 mm	0.0000	0.0000
-1.00 to -0.50; 1.4 mm	0.0000	0.0000
-0.50 to 0.00; 1 mm	0.0144	0.1333
0.00 to 0.50; (707 µm)	14.7215	136.1154
0.50 to 1.00; (500 µm)	20.4386	188.9749
1.00 to 1.50; (353.6 µm)	19.0967	176.5682
1.50 to 2.00; (250 µm)	12.4685	115.2840
2.00 to 2.50; (176.8 µm)	4.4053	40.7316
2.50 to 3.00; (125 µm)	0.5830	5.3904
3.00 to 3.50; (88.39 µm)	0.0048	0.0443
3.50 to 4.00; (62.5 µm)	0.2742	2.5354
4.00 to 4.50; (44.19 µm)	0.3483	3.2207
4.50 to 5.00; (31.25 µm)	0.0831	0.7685
5.00 to 5.50; (22.097 µm)	0.0000	0.0000
5.50 to 6.00; (15.625 µm)	0.0219	0.2024
6.00 to 6.50; (11.049 µm)	0.1156	1.0684
6.50 to 7.00; (7.813 µm)	0.1634	1.5112
7.00 to 7.50; (5.524 µm)	0.1611	1.4894
7.50 to 8.00; (3.906 µm)	0.1399	1.2936
8.00 to 8.50; (2.762 µm)	0.0594	0.5495
8.50 to 9.00; (1.953 µm)	0.0092	0.0855
9.00 to 9.50; (1.381 µm)	0.0000	0.0000
9.50 to 10.00; (0.977 µm)	0.0000	0.0000
10.00 to 10.50; (0.691 µm)	0.0000	0.0000
10.50 to 11.00; (0.488 µm)	0.0000	0.0000
11.00 to 11.50; (0.345 µm)	0.0000	0.0000
11.50 to 12.00; (0.244 µm)	0.0000	0.0000
12.00 to 12.50; (0.173 µm)	0.0000	0.0000
12.50 to 13.00; (0.122 µm)	0.0000	0.0000
13.00 to 13.50; (0.086 µm)	0.0000	0.0000

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Exercise Code:	PS61
LabCode:	PSA_2311
Sample Code:	PS612311

Phi interval (explicit) + sieve mesh (theoretical sieves shown in brackets)	Percentage	Grams
	(mark as "0" for no material or not analysed)	
-6.50 to -6.00; 63 mm	0.0000	0.0000
-6.00 to -5.50; 45 mm	0.0000	0.0000
-5.50 to -5.00; 31.5 mm	0.0000	0.0000
-5.00 to -4.50; 22.4 mm	0.0000	0.0000
-4.50 to -4.00; 16 mm	0.0000	0.0000
-4.00 to -3.50; 11.2 mm	0.2340	2.1900
-3.50 to -3.00; 8 mm	5.9265	55.4700
-3.00 to -2.50; 5.6 mm	12.8562	120.3300
-2.50 to -2.00; 4 mm	7.4180	69.4300
-2.00 to -1.50; 2.8 mm	0.0246	0.2300
-1.50 to -1.00; 2 mm	0.0000	0.0000
-1.00 to -0.50; 1.4 mm	0.0075	0.0700
-0.50 to 0.00; 1 mm	0.0331	0.3100
0.00 to 0.50; (707 µm)	12.0361	112.6543
0.50 to 1.00; (500 µm)	19.2597	180.2653
1.00 to 1.50; (353.6 µm)	19.0717	178.5054
1.50 to 2.00; (250 µm)	11.4997	107.6335
2.00 to 2.50; (176.8 µm)	3.6670	34.3220
2.50 to 3.00; (125 µm)	0.4260	3.9871
3.00 to 3.50; (88.39 µm)	0.1008	0.9439
3.50 to 4.00; (62.5 µm)	0.4849	4.5387
4.00 to 4.50; (44.19 µm)	0.5748	5.3797
4.50 to 5.00; (31.25 µm)	0.3828	3.5827
5.00 to 5.50; (22.097 µm)	0.3381	3.1643
5.50 to 6.00; (15.625 µm)	0.4881	4.5682
6.00 to 6.50; (11.049 µm)	0.6772	6.3388
6.50 to 7.00; (7.813 µm)	0.8031	7.5169
7.00 to 7.50; (5.524 µm)	0.8490	7.9466
7.50 to 8.00; (3.906 µm)	0.8119	7.5988
8.00 to 8.50; (2.762 µm)	0.6915	6.4718
8.50 to 9.00; (1.953 µm)	0.5168	4.8374
9.00 to 9.50; (1.381 µm)	0.3486	3.2626
9.50 to 10.00; (0.977 µm)	0.2316	2.1675
10.00 to 10.50; (0.691 µm)	0.1254	1.1740
10.50 to 11.00; (0.488 µm)	0.0912	0.8533
11.00 to 11.50; (0.345 µm)	0.0243	0.2271
11.50 to 12.00; (0.244 µm)	0.0000	0.0000
12.00 to 12.50; (0.173 µm)	0.0000	0.0000
12.50 to 13.00; (0.122 µm)	0.0000	0.0000
13.00 to 13.50; (0.086 µm)	0.0000	0.0000

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Exercise Code:	PS61
LabCode:	PSA_2312
Sample Code:	PS612312

Phi interval (explicit) + sieve mesh (theoretical sieves shown in brackets)	Percentage (mark as "0" for no material or not analysed)	Grams
-6.50 to -6.00; 63 mm	0.0000	
-6.00 to -5.50; 45 mm	0.0000	
-5.50 to -5.00; 31.5 mm	0.0000	
-5.00 to -4.50; 22.4 mm	0.0000	
-4.50 to -4.00; 16 mm	0.0000	
-4.00 to -3.50; 11.2 mm	0.0000	
-3.50 to -3.00; 8 mm	5.5249	
-3.00 to -2.50; 5.6 mm	13.0161	
-2.50 to -2.00; 4 mm	7.7775	
-2.00 to -1.50; 2.8 mm	0.0046	
-1.50 to -1.00; 2 mm	0.0000	
-1.00 to -0.50; 1.4 mm	0.0023	
-0.50 to 0.00; 1 mm	0.0034	
0.00 to 0.50; (707 µm)	11.4170	
0.50 to 1.00; (500 µm)	19.4058	
1.00 to 1.50; (353.6 µm)	21.1623	
1.50 to 2.00; (250 µm)	14.4369	
2.00 to 2.50; (176.8 µm)	5.5852	
2.50 to 3.00; (125 µm)	0.8628	
3.00 to 3.50; (88.39 µm)	0.1079	
3.50 to 4.00; (62.5 µm)	0.4237	
4.00 to 4.50; (44.19 µm)	0.2696	
4.50 to 5.00; (31.25 µm)	0.0000	
5.00 to 5.50; (22.097 µm)	0.0000	
5.50 to 6.00; (15.625 µm)	0.0000	
6.00 to 6.50; (11.049 µm)	0.0000	
6.50 to 7.00; (7.813 µm)	0.0000	
7.00 to 7.50; (5.524 µm)	0.0000	
7.50 to 8.00; (3.906 µm)	0.0000	
8.00 to 8.50; (2.762 µm)	0.0000	
8.50 to 9.00; (1.953 µm)	0.0000	
9.00 to 9.50; (1.381 µm)	0.0000	
9.50 to 10.00; (0.977 µm)	0.0000	
10.00 to 10.50; (0.691 µm)	0.0000	
10.50 to 11.00; (0.488 µm)		
11.00 to 11.50; (0.345 µm)		
11.50 to 12.00; (0.244 µm)		
12.00 to 12.50; (0.173 µm)		
12.50 to 13.00; (0.122 µm)		
13.00 to 13.50; (0.086 µm)		

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Exercise Code:	PS61
LabCode:	PSA_2313
Sample Code:	PS612313

Phi interval (explicit) + sieve mesh (theoretical sieves shown in brackets)	Percentage (mark as "0" for no material or not analysed)	Grams (mark as "0" for no material or not analysed)
-6.50 to -6.00; 63 mm	0.00	0.00
-6.00 to -5.50; 45 mm	0.00	0.00
-5.50 to -5.00; 31.5 mm	0.00	0.00
-5.00 to -4.50; 22.4 mm	0.00	0.00
-4.50 to -4.00; 16 mm	0.00	0.00
-4.00 to -3.50; 11.2 mm	0.00	0.00
-3.50 to -3.00; 8 mm	6.08	51.72
-3.00 to -2.50; 5.6 mm	11.11	94.49
-2.50 to -2.00; 4 mm	9.58	81.44
-2.00 to -1.50; 2.8 mm	0.07	0.59
-1.50 to -1.00; 2 mm	0.00	0.00
-1.00 to -0.50; 1.4 mm	0.00	0.00
-0.50 to 0.00; 1 mm	0.00	0.03
0.00 to 0.50; (707 µm)	14.36	122.05
0.50 to 1.00; (500 µm)	20.98	178.36
1.00 to 1.50; (353.6 µm)	20.86	177.37
1.50 to 2.00; (250 µm)	11.15	94.79
2.00 to 2.50; (176.8 µm)	2.98	25.34
2.50 to 3.00; (125 µm)	1.06	9.00
3.00 to 3.50; (88.39 µm)	0.42	3.55
3.50 to 4.00; (62.5 µm)	0.14	1.20
4.00 to 4.50; (44.19 µm)	0.08	0.70
4.50 to 5.00; (31.25 µm)	0.07	0.63
5.00 to 5.50; (22.097 µm)	0.07	0.57
5.50 to 6.00; (15.625 µm)	0.07	0.62
6.00 to 6.50; (11.049 µm)	0.08	0.69
6.50 to 7.00; (7.813 µm)	0.09	0.75
7.00 to 7.50; (5.524 µm)	0.09	0.78
7.50 to 8.00; (3.906 µm)	0.09	0.73
8.00 to 8.50; (2.762 µm)	0.07	0.60
8.50 to 9.00; (1.953 µm)	0.06	0.52
9.00 to 9.50; (1.381 µm)	0.06	0.54
9.50 to 10.00; (0.977 µm)	0.07	0.58
10.00 to 10.50; (0.691 µm)	0.07	0.56
10.50 to 11.00; (0.488 µm)	0.06	0.51
11.00 to 11.50; (0.345 µm)	0.05	0.45
11.50 to 12.00; (0.244 µm)	0.04	0.37
12.00 to 12.50; (0.173 µm)	0.03	0.29
12.50 to 13.00; (0.122 µm)	0.03	0.23
13.00 to 13.50; (0.086 µm)	0.02	0.15

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Exercise Code:	PS61
LabCode:	PSA_2320
Sample Code:	PS612320

Phi interval (explicit) + sieve mesh (theoretical sieves shown in brackets)	Percentage (mark as "0" for no material or not analysed)	Grams (mark as "0" for no material or not analysed)
-6.50 to -6.00; 63 mm		
-6.00 to -5.50; 45 mm		
-5.50 to -5.00; 31.5 mm		
-5.00 to -4.50; 22.4 mm		
-4.50 to -4.00; 16 mm		
-4.00 to -3.50; 11.2 mm	0.00	0.00
-3.50 to -3.00; 8 mm	5.31	49.64
-3.00 to -2.50; 5.6 mm	12.36	115.51
-2.50 to -2.00; 4 mm	8.91	83.25
-2.00 to -1.50; 2.8 mm	0.00	0.00
-1.50 to -1.00; 2 mm	0.00	0.00
-1.00 to -0.50; 1.4 mm	0.00	0.00
-0.50 to 0.00; 1 mm	0.00	0.00
0.00 to 0.50; (707 µm)	10.90	101.90
0.50 to 1.00; (500 µm)	19.83	185.42
1.00 to 1.50; (353.6 µm)	21.51	201.08
1.50 to 2.00; (250 µm)	14.48	135.40
2.00 to 2.50; (176.8 µm)	5.34	49.89
2.50 to 3.00; (125 µm)	0.47	4.40
3.00 to 3.50; (88.39 µm)	0.00	0.00
3.50 to 4.00; (62.5 µm)	0.00	0.00
4.00 to 4.50; (44.19 µm)	0.00	0.00
4.50 to 5.00; (31.25 µm)	0.00	0.00
5.00 to 5.50; (22.097 µm)	0.00	0.00
5.50 to 6.00; (15.625 µm)	0.13	1.24
6.00 to 6.50; (11.049 µm)	0.21	1.99
6.50 to 7.00; (7.813 µm)	0.22	2.01
7.00 to 7.50; (5.524 µm)	0.18	1.68
7.50 to 8.00; (3.906 µm)	0.15	1.40
8.00 to 8.50; (2.762 µm)	0.00	0.00
8.50 to 9.00; (1.953 µm)	0.00	0.00
9.00 to 9.50; (1.381 µm)		
9.50 to 10.00; (0.977 µm)		
10.00 to 10.50; (0.691 µm)		
10.50 to 11.00; (0.488 µm)		
11.00 to 11.50; (0.345 µm)		
11.50 to 12.00; (0.244 µm)		
12.00 to 12.50; (0.173 µm)		
12.50 to 13.00; (0.122 µm)		
13.00 to 13.50; (0.086 µm)		

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Exercise Code:	PS61
LabCode:	BM_REP1
Sample Code:	PS61REP1

Phi interval (explicit) + sieve mesh (theoretical sieves shown in brackets)	Percentage (mark as "0" for no material or not analysed)	Grams (mark as "0" for no material or not analysed)
-6.50 to -6.00; 63 mm	0.0000	0.0000
-6.00 to -5.50; 45 mm	0.0000	0.0000
-5.50 to -5.00; 31.5 mm	0.0000	0.0000
-5.00 to -4.50; 22.4 mm	0.0000	0.0000
-4.50 to -4.00; 16 mm	0.0000	0.0000
-4.00 to -3.50; 11.2 mm	0.0000	0.0000
-3.50 to -3.00; 8 mm	6.5257	55.6900
-3.00 to -2.50; 5.6 mm	11.0476	94.2800
-2.50 to -2.00; 4 mm	9.2501	78.9400
-2.00 to -1.50; 2.8 mm	0.0187	0.1600
-1.50 to -1.00; 2 mm	0.0000	0.0000
-1.00 to -0.50; 1.4 mm	0.0000	0.0000
-0.50 to 0.00; 1 mm	0.0094	0.0800
0.00 to 0.50; (707 µm)	14.4329	123.1702
0.50 to 1.00; (500 µm)	21.0684	179.7981
1.00 to 1.50; (353.6 µm)	20.7546	177.1200
1.50 to 2.00; (250 µm)	11.0539	94.3339
2.00 to 2.50; (176.8 µm)	2.9958	25.5657
2.50 to 3.00; (125 µm)	1.0875	9.2810
3.00 to 3.50; (88.39 µm)	0.4148	3.5400
3.50 to 4.00; (62.5 µm)	0.1364	1.1644
4.00 to 4.50; (44.19 µm)	0.0802	0.6846
4.50 to 5.00; (31.25 µm)	0.0731	0.6240
5.00 to 5.50; (22.097 µm)	0.0637	0.5440
5.50 to 6.00; (15.625 µm)	0.0721	0.6156
6.00 to 6.50; (11.049 µm)	0.0814	0.6945
6.50 to 7.00; (7.813 µm)	0.0886	0.7564
7.00 to 7.50; (5.524 µm)	0.0932	0.7952
7.50 to 8.00; (3.906 µm)	0.0878	0.7496
8.00 to 8.50; (2.762 µm)	0.0724	0.6177
8.50 to 9.00; (1.953 µm)	0.0626	0.5344
9.00 to 9.50; (1.381 µm)	0.0644	0.5492
9.50 to 10.00; (0.977 µm)	0.0679	0.5796
10.00 to 10.50; (0.691 µm)	0.0657	0.5611
10.50 to 11.00; (0.488 µm)	0.0596	0.5087
11.00 to 11.50; (0.345 µm)	0.0515	0.4399
11.50 to 12.00; (0.244 µm)	0.0430	0.3671
12.00 to 12.50; (0.173 µm)	0.0336	0.2864
12.50 to 13.00; (0.122 µm)	0.0259	0.2209
13.00 to 13.50; (0.086 µm)	0.0173	0.1479

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Exercise Code:	PS61
LabCode:	BM_REP2
Sample Code:	PS61REP2

Phi interval (explicit) + sieve mesh (theoretical sieves shown in brackets)	Percentage (mark as "0" for no material or not analysed)	Grams (mark as "0" for no material or not analysed)
-6.50 to -6.00; 63 mm	0.0000	0.0000
-6.00 to -5.50; 45 mm	0.0000	0.0000
-5.50 to -5.00; 31.5 mm	0.0000	0.0000
-5.00 to -4.50; 22.4 mm	0.0000	0.0000
-4.50 to -4.00; 16 mm	0.0000	0.0000
-4.00 to -3.50; 11.2 mm	0.0000	0.0000
-3.50 to -3.00; 8 mm	6.6065	56.6300
-3.00 to -2.50; 5.6 mm	10.9602	93.9500
-2.50 to -2.00; 4 mm	9.4716	81.1900
-2.00 to -1.50; 2.8 mm	0.0618	0.5300
-1.50 to -1.00; 2 mm	0.0000	0.0000
-1.00 to -0.50; 1.4 mm	0.0000	0.0000
-0.50 to 0.00; 1 mm	0.0035	0.0300
0.00 to 0.50; (707 µm)	14.6625	125.6857
0.50 to 1.00; (500 µm)	20.9112	179.2484
1.00 to 1.50; (353.6 µm)	20.5386	176.0546
1.50 to 2.00; (250 µm)	10.9222	93.6243
2.00 to 2.50; (176.8 µm)	2.9953	25.6753
2.50 to 3.00; (125 µm)	1.1128	9.5386
3.00 to 3.50; (88.39 µm)	0.4241	3.6352
3.50 to 4.00; (62.5 µm)	0.1466	1.2564
4.00 to 4.50; (44.19 µm)	0.0795	0.6814
4.50 to 5.00; (31.25 µm)	0.0730	0.6258
5.00 to 5.50; (22.097 µm)	0.0627	0.5375
5.50 to 6.00; (15.625 µm)	0.0707	0.6059
6.00 to 6.50; (11.049 µm)	0.0795	0.6814
6.50 to 7.00; (7.813 µm)	0.0872	0.7478
7.00 to 7.50; (5.524 µm)	0.0932	0.7992
7.50 to 8.00; (3.906 µm)	0.0889	0.7619
8.00 to 8.50; (2.762 µm)	0.0730	0.6262
8.50 to 9.00; (1.953 µm)	0.0634	0.5433
9.00 to 9.50; (1.381 µm)	0.0658	0.5637
9.50 to 10.00; (0.977 µm)	0.0689	0.5904
10.00 to 10.50; (0.691 µm)	0.0651	0.5579
10.50 to 11.00; (0.488 µm)	0.0573	0.4909
11.00 to 11.50; (0.345 µm)	0.0481	0.4122
11.50 to 12.00; (0.244 µm)	0.0391	0.3353
12.00 to 12.50; (0.173 µm)	0.0299	0.2563
12.50 to 13.00; (0.122 µm)	0.0227	0.1949
13.00 to 13.50; (0.086 µm)	0.0151	0.1294

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Exercise Code:	PS61
LabCode:	BM_REP3
Sample Code:	PS61REP3

Phi interval (explicit) + sieve mesh (theoretical sieves shown in brackets)	Percentage (mark as "0" for no material or not analysed)	Grams (mark as "0" for no material or not analysed)
-6.50 to -6.00; 63 mm	0.0000	0.0000
-6.00 to -5.50; 45 mm	0.0000	0.0000
-5.50 to -5.00; 31.5 mm	0.0000	0.0000
-5.00 to -4.50; 22.4 mm	0.0000	0.0000
-4.50 to -4.00; 16 mm	0.0000	0.0000
-4.00 to -3.50; 11.2 mm	0.0000	0.0000
-3.50 to -3.00; 8 mm	6.6147	57.1500
-3.00 to -2.50; 5.6 mm	11.3915	98.4200
-2.50 to -2.00; 4 mm	8.4724	73.2000
-2.00 to -1.50; 2.8 mm	0.0451	0.3900
-1.50 to -1.00; 2 mm	0.0000	0.0000
-1.00 to -0.50; 1.4 mm	0.0000	0.0000
-0.50 to 0.00; 1 mm	0.0035	0.0300
0.00 to 0.50; (707 µm)	14.7531	127.4638
0.50 to 1.00; (500 µm)	21.1075	182.3644
1.00 to 1.50; (353.6 µm)	20.7462	179.2428
1.50 to 2.00; (250 µm)	11.0063	95.0920
2.00 to 2.50; (176.8 µm)	2.9909	25.8407
2.50 to 3.00; (125 µm)	1.1048	9.5454
3.00 to 3.50; (88.39 µm)	0.4228	3.6527
3.50 to 4.00; (62.5 µm)	0.1448	1.2507
4.00 to 4.50; (44.19 µm)	0.0803	0.6939
4.50 to 5.00; (31.25 µm)	0.0750	0.6478
5.00 to 5.50; (22.097 µm)	0.0645	0.5573
5.50 to 6.00; (15.625 µm)	0.0715	0.6176
6.00 to 6.50; (11.049 µm)	0.0803	0.6935
6.50 to 7.00; (7.813 µm)	0.0880	0.7603
7.00 to 7.50; (5.524 µm)	0.0932	0.8056
7.50 to 8.00; (3.906 µm)	0.0881	0.7614
8.00 to 8.50; (2.762 µm)	0.0724	0.6258
8.50 to 9.00; (1.953 µm)	0.0629	0.5438
9.00 to 9.50; (1.381 µm)	0.0652	0.5632
9.50 to 10.00; (0.977 µm)	0.0685	0.5922
10.00 to 10.50; (0.691 µm)	0.0655	0.5657
10.50 to 11.00; (0.488 µm)	0.0584	0.5045
11.00 to 11.50; (0.345 µm)	0.0497	0.4293
11.50 to 12.00; (0.244 µm)	0.0409	0.3535
12.00 to 12.50; (0.173 µm)	0.0316	0.2732
12.50 to 13.00; (0.122 µm)	0.0242	0.2093
13.00 to 13.50; (0.086 µm)	0.0162	0.1397

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Exercise Code:	PS61
LabCode:	BM_REP4
Sample Code:	PS61REP4

Phi interval (explicit) + sieve mesh (theoretical sieves shown in brackets)	Percentage (mark as "0" for no material or not analysed)	Grams (mark as "0" for no material or not analysed)
-6.50 to -6.00; 63 mm	0.0000	0.0000
-6.00 to -5.50; 45 mm	0.0000	0.0000
-5.50 to -5.00; 31.5 mm	0.0000	0.0000
-5.00 to -4.50; 22.4 mm	0.0000	0.0000
-4.50 to -4.00; 16 mm	0.0000	0.0000
-4.00 to -3.50; 11.2 mm	0.0000	0.0000
-3.50 to -3.00; 8 mm	6.1011	52.4800
-3.00 to -2.50; 5.6 mm	11.1490	95.9000
-2.50 to -2.00; 4 mm	8.9901	77.3300
-2.00 to -1.50; 2.8 mm	0.0372	0.3200
-1.50 to -1.00; 2 mm	0.0000	0.0000
-1.00 to -0.50; 1.4 mm	0.0000	0.0000
-0.50 to 0.00; 1 mm	0.0047	0.0400
0.00 to 0.50; (707 µm)	14.7074	126.5090
0.50 to 1.00; (500 µm)	21.0610	181.1604
1.00 to 1.50; (353.6 µm)	20.9142	179.8974
1.50 to 2.00; (250 µm)	11.1116	95.5783
2.00 to 2.50; (176.8 µm)	3.0032	25.8329
2.50 to 3.00; (125 µm)	1.1017	9.4769
3.00 to 3.50; (88.39 µm)	0.4260	3.6640
3.50 to 4.00; (62.5 µm)	0.1490	1.2816
4.00 to 4.50; (44.19 µm)	0.0853	0.7336
4.50 to 5.00; (31.25 µm)	0.0784	0.6743
5.00 to 5.50; (22.097 µm)	0.0690	0.5936
5.50 to 6.00; (15.625 µm)	0.0768	0.6605
6.00 to 6.50; (11.049 µm)	0.0847	0.7288
6.50 to 7.00; (7.813 µm)	0.0915	0.7869
7.00 to 7.50; (5.524 µm)	0.0968	0.8323
7.50 to 8.00; (3.906 µm)	0.0919	0.7902
8.00 to 8.50; (2.762 µm)	0.0755	0.6491
8.50 to 9.00; (1.953 µm)	0.0656	0.5642
9.00 to 9.50; (1.381 µm)	0.0682	0.5863
9.50 to 10.00; (0.977 µm)	0.0715	0.6148
10.00 to 10.50; (0.691 µm)	0.0676	0.5818
10.50 to 11.00; (0.488 µm)	0.0596	0.5126
11.00 to 11.50; (0.345 µm)	0.0501	0.4310
11.50 to 12.00; (0.244 µm)	0.0408	0.3510
12.00 to 12.50; (0.173 µm)	0.0312	0.2686
12.50 to 13.00; (0.122 µm)	0.0238	0.2043
13.00 to 13.50; (0.086 µm)	0.0158	0.1356

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Exercise Code:	PS61
LabCode:	BM_REP5
Sample Code:	PS61REP5

Phi interval (explicit) + sieve mesh (theoretical sieves shown in brackets)	Percentage (mark as "0" for no material or not analysed)	Grams (mark as "0" for no material or not analysed)
-6.50 to -6.00; 63 mm	0.0000	0.0000
-6.00 to -5.50; 45 mm	0.0000	0.0000
-5.50 to -5.00; 31.5 mm	0.0000	0.0000
-5.00 to -4.50; 22.4 mm	0.0000	0.0000
-4.50 to -4.00; 16 mm	0.0000	0.0000
-4.00 to -3.50; 11.2 mm	0.0000	0.0000
-3.50 to -3.00; 8 mm	6.9395	59.7100
-3.00 to -2.50; 5.6 mm	10.5725	90.9700
-2.50 to -2.00; 4 mm	9.0152	77.5700
-2.00 to -1.50; 2.8 mm	0.0163	0.1400
-1.50 to -1.00; 2 mm	0.0000	0.0000
-1.00 to -0.50; 1.4 mm	0.0000	0.0000
-0.50 to 0.00; 1 mm	0.0070	0.0600
0.00 to 0.50; (707 µm)	14.8020	127.3626
0.50 to 1.00; (500 µm)	21.0799	181.3802
1.00 to 1.50; (353.6 µm)	20.7656	178.6752
1.50 to 2.00; (250 µm)	10.9928	94.5866
2.00 to 2.50; (176.8 µm)	2.9542	25.4189
2.50 to 3.00; (125 µm)	1.0777	9.2733
3.00 to 3.50; (88.39 µm)	0.4117	3.5421
3.50 to 4.00; (62.5 µm)	0.1426	1.2272
4.00 to 4.50; (44.19 µm)	0.0822	0.7072
4.50 to 5.00; (31.25 µm)	0.0772	0.6641
5.00 to 5.50; (22.097 µm)	0.0672	0.5784
5.50 to 6.00; (15.625 µm)	0.0748	0.6436
6.00 to 6.50; (11.049 µm)	0.0825	0.7094
6.50 to 7.00; (7.813 µm)	0.0886	0.7623
7.00 to 7.50; (5.524 µm)	0.0934	0.8033
7.50 to 8.00; (3.906 µm)	0.0887	0.7628
8.00 to 8.50; (2.762 µm)	0.0732	0.6303
8.50 to 9.00; (1.953 µm)	0.0640	0.5508
9.00 to 9.50; (1.381 µm)	0.0667	0.5741
9.50 to 10.00; (0.977 µm)	0.0704	0.6057
10.00 to 10.50; (0.691 µm)	0.0673	0.5793
10.50 to 11.00; (0.488 µm)	0.0601	0.5169
11.00 to 11.50; (0.345 µm)	0.0511	0.4400
11.50 to 12.00; (0.244 µm)	0.0421	0.3620
12.00 to 12.50; (0.173 µm)	0.0324	0.2788
12.50 to 13.00; (0.122 µm)	0.0248	0.2132
13.00 to 13.50; (0.086 µm)	0.0165	0.1418

APPENDIX 2

Appendix 2.1 - Percentage of gravel, sand and mud recorded by each participant, calculated in GRADISTAT from final merged data used to create Figure 4.

	gravel	sand	mud
PSA_2301	27.92	72.08	0.00
PSA_2302	26.51	72.22	1.27
PSA_2303	26.28	71.33	2.39
PSA_2304	26.53	72.17	1.29
PSA_2305	25.76	74.13	0.12
PSA_2306	25.44	74.56	0.00
PSA_2307	26.05	70.54	3.41
PSA_2308	25.74	71.85	2.41
PSA_2309	27.04	64.72	8.24
PSA_2310	26.89	72.01	1.10
PSA_2311	26.46	66.59	6.95
PSA_2312	26.32	73.41	0.27
PSA_2313	26.85	71.95	1.21
PSA_2320	26.57	72.54	0.89
BM Average	26.66	72.13	1.21

Appendix 2.2 - Summary of final laser data provided by each participant used to create Figure 6.

	Percentage									
	0 - 1 phi	1 - 2 phi	2 - 3 phi	3 - 4 phi	4 - 5 phi	5 - 6 phi	6 - 7 phi	7 - 8 phi	8 - 9 phi	>9 phi
PSA_2301	47.99	45.62	6.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PSA_2302	50.03	42.08	5.40	0.76	0.21	0.19	0.24	0.27	0.20	0.62
PSA_2303	43.71	45.08	6.73	1.23	0.52	0.50	0.55	0.51	0.39	0.77
PSA_2304	31.08	30.88	4.26	0.62	0.17	0.14	0.19	0.20	0.15	0.44
PSA_2305	25.93	61.24	11.15	1.52	0.16	0.00	0.00	0.00	0.00	0.00
PSA_2306	43.87	48.39	7.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PSA_2307	41.24	47.11	6.60	0.44	0.62	0.62	1.16	1.33	0.86	0.03
PSA_2308	39.42	46.98	9.08	1.27	0.97	0.49	0.81	0.80	0.18	0.00
PSA_2309	9.94	30.43	19.66	4.63	1.48	1.18	1.52	1.71	1.32	1.03
PSA_2310	48.10	43.18	6.82	0.38	0.59	0.03	0.38	0.41	0.09	0.00
PSA_2311	42.58	41.59	5.57	0.80	1.30	1.12	2.01	2.26	1.64	1.12
PSA_2312	39.97	46.36	8.37	0.69	0.35	0.00	0.00	0.00	0.00	0.00
PSA_2313	48.30	43.76	5.52	0.76	0.21	0.19	0.23	0.24	0.18	0.59
PSA_2320	41.77	48.91	7.89	0.00	0.00	0.18	0.58	0.45	0.22	0.00
BM Average	48.70	43.31	5.57	0.77	0.21	0.19	0.23	0.25	0.19	0.58

APPENDIX 2

Appendix 2.3 - Percentage gravel, sand and mud as provided by the participant in the summary data and the D_{10}, D_{50} and D_{90} (microns) of final merged data calculated using GRADISTAT, used to create Figures 7 (a) and (b).

	gravel	sand	mud	d10	d50	d90
	%			microns		
PSA_2301	27.92	72.08	0.00	289.2	619.2	7194.0
PSA_2302	26.51	72.22	1.27	286.7	620.6	6998.3
PSA_2303	26.28	71.33	2.39	262.8	583.5	7116.1
PSA_2304	26.50	72.20	1.30	281.3	633.1	7109.6
PSA_2305	25.80	74.10	0.10	252.0	465.4	7069.8
PSA_2306	25.44	74.56	0.00	276.9	572.7	6836.8
PSA_2307	26.05	70.54	3.41	259.1	561.0	7150.1
PSA_2308	25.70	71.90	2.40	248.5	548.7	7025.2
PSA_2309	27.00	64.70	8.20	91.7	365.1	7339.9
PSA_2310	26.89	72.01	1.10	276.6	613.5	7065.2
PSA_2311	12.86	66.59	6.95	214.3	575.3	7191.6
PSA_2312	26.30	73.40	0.30	267.1	568.1	7076.7
PSA_2313	26.85	71.95	1.21	284.8	611.4	7055.1
PSA_2320	26.57	72.54	0.89	270.6	568.1	6987.1
BM Average	26.66	72.13	1.21	284.8	613.0	7156.8